

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI

JENNIFER KRULL,)
)
 Plaintiff,)
)
 v.)
)
 META PLATFORMS, INC., FACEBOOK)
 HOLDINGS, LLC, FACEBOOK)
 OPERATIONS, LLC, FACEBOOK)
 PAYMENTS, INC., FACEBOOK)
 TECHNOLOGIES, LLC, INSTAGRAM, LLC,)
 SICULUS, INC., & SNAP, INC.,)
)
 Defendants.)
 _____)

COMPLAINT

Docket No. 4:22-1262

JURY TRIAL DEMANDED

TABLE OF CONTENTS

I. INTRODUCTION..... 1

II. JURISDICTION AND VENUE 4

III. PARTIES..... 5

 Plaintiff..... 5

 Defendant Meta Platforms, Inc. 5

 Subsidiary Meta Defendants 6

 Defendant Snap, Inc. 19

IV. GENERAL FACTUAL ALLEGATIONS 24

 A. Teenagers Are Particularly Vulnerable to the Perils of Excessive Social Media Use 24

 C. Defendants Knowingly Exploit Teenage Vulnerabilities for Unjust Gain..... 34

 D. Defendants’ Business Models Encourage Problematic Use to Maximize Screen Time, Thereby Increasing Revenue..... 34

 E. Plaintiff Expressly Disclaims Any and All Claims Seeking to Hold Defendants Liable as the Publisher or Speaker of Any Content Provided, Posted, or Created by Third Parties..... 36

V. PLAINTIFF-SPECIFIC ALLEGATIONS..... 37

CAUSES OF ACTION 46

VI. DEMAND FOR A JURY TRIAL..... 78

VII. PRAYER FOR RELIEF..... 78

I. INTRODUCTION

1. This matter arises from an egregious breach of the public trust by Defendants Meta Platforms, Inc. (hereinafter, “Meta Platforms”), Facebook Holdings, LLC (hereinafter, “Facebook 1”), Facebook Operations, LLC (hereinafter, “Facebook 2”), Facebook Payments, Inc. (hereinafter, “Facebook 3”), Facebook Technologies, LLC (hereinafter, “Facebook 4”), Instagram, LLC (hereinafter, “Instagram”), Siculus, Inc. (hereinafter, “Siculus” and, collectively—including Facebook 1, Facebook 2, Facebook 3, Facebook 4, Instagram, and Siculus—“Meta”), together with Snap Inc. (hereinafter, “Snap”).

2. Over the last two decades, more and more of our lives have moved onto social media platforms and other digital public spaces. In this vast, largely unregulated universe of digital public spaces, which are privately owned and primarily run for profit, there exists tension between what is best for technology companies’ profit margins and what is best for the individual user (especially the predictable adolescent user) and for society. Business models are often built around maximizing user engagement, without regard to whether users engage with the platform and one another in safe and healthy ways. Technology companies, including Defendants, focus on maximizing time spent, not time well spent. In recent years, there has been growing concern about the impact of digital technologies, particularly social media, on the mental health and wellbeing of adolescents. Many researchers argue that Defendants’ social media products facilitate cyberbullying, contribute to obesity and eating disorders, instigate sleep deprivation to achieve around-the-clock platform engagement, and encourage children to compare themselves negatively to others and develop a broad discontentment for life. These platforms also have been connected to depression, anxiety, self-harm, and ultimately suicidal ideation, suicide attempts, and completed suicide.

3. Defendants have intentionally designed their products to maximize users’ screen

time, using complex algorithms designed to exploit human psychology and driven by advanced computer algorithms and artificial intelligence available to two of the largest technology companies in the world. Defendants have progressively modified their products to promote problematic and excessive use that they know threatens the actuation of addictive and self-destructive behavioral patterns.

4. Excessive screen time is harmful to adolescents' mental health, sleep patterns, emotional well-being. Defendants' products lack any warnings that foreseeable product use can disrupt healthy sleep patterns, or specific warnings to parents when their child's product usage exceeds healthy levels or occurs during sleep hours, rendering the platforms unreasonably dangerous. Reasonable and responsible parents are not able to accurately monitor their child's screen time because most adolescents own or can obtain access to mobile devices and engage in social media use outside their parents' presence.

5. Defendants do not charge their users to use their platforms, but instead receive money from advertisers who pay a premium to target advertisements to specific categories of people as studied and sorted by Defendants' algorithms. Thus, Defendants generate revenue based upon the total time spent on the application, which directly correlates with the number of advertisements that can be shown to each user.

6. Rather than making meaningful changes to safeguard the health and safety of its users, Defendants have consistently chosen to prioritize profit over safety by continuing to implement and require its users to submit to product components that increase the frequency and duration of users' engagement, resulting in numerous harms, which are described in greater detail below.

7. Plaintiff brings claims of strict liability based on Defendants' defective design of

their social media products that renders such products not reasonably safe for ordinary consumers in general and minors in particular. It is technologically feasible to design social media products that substantially decrease the incidence and magnitude of harm to ordinary consumers, including minors, arising from their foreseeable use of Defendants' products with a negligible increase in production cost. It is also technologically feasible to design and implement effective age and identity verification protocols to ensure that only children of an appropriate age may have access to these products.

8. Plaintiff also brings claims for strict liability based on Defendants' failure to provide adequate warnings to minor users and their parents about the danger of mental, physical, and emotional harms arising from the foreseeable use of their social media products.

9. Plaintiff also brings claims for common law negligence arising from Defendants' unreasonably dangerous social media products and their failure to warn of such dangers. Defendants knew or, in the exercise of ordinary care, should have known that their social media products were harmful to a significant percentage of their minor users and failed to re-design their products to ameliorate these harms or warn minor users and their parents of dangers arising out of the foreseeable use of their products. Defendants intentionally created an attractive nuisance to children and simultaneously failed to provide adequate safeguards from the harmful effects that they knew were occurring.

10. As is now generally known, in Fall 2021, Frances Haugen, a former Facebook employee turned whistleblower, came forward with internal documents showing that Meta was aware that its platforms and products cause significant harm to its users, especially children. Snap's social media platform has similar designs and mechanisms of action resulting in similarly addictive qualities and harmful outcomes to minor users. To this day, the addictive qualities of all

Defendants' products and their harmful algorithms are not fully known or understood by minor users or their parents.

II. JURISDICTION AND VENUE

11. This Court has subject-matter jurisdiction over this case under 28 U.S.C. § 1332(a) because the amount in controversy exceeds \$75,000 and Plaintiff and Defendants are citizens of different states. This Court has specific personal jurisdiction over Defendants because these Defendants transact business in the State of Missouri and purposely avail themselves of the benefits of transacting business with Missouri residents. Plaintiff's claims set forth herein arise out of and/or relate to Defendants' activities in the State of Missouri and purposeful availment of the benefits of transacting business here, and the exercise of personal jurisdiction by this Court comports with traditional notions of fair play and substantial justice.

12. Defendants interface with a significant percentage of the population of the State of Missouri relating to use of the products at issue in this case. Defendants also interact extensively with—i.e., they send messages, notifications, and communications to—users Defendants expect and know to be in the State of Missouri. Defendants also provide a myriad of other interactive services and recommendations to users Defendants expect and know to be in the State of Missouri.

13. Defendants advertise extensively in Missouri, through contractual relationships with third-party “partners” who advertise on their behalf via electronic and internet-based platforms and devices. Defendants also have agreements with cell phone manufacturers, and/or providers and retailers, who often pre-install its products on mobile devices prior to sale, without regard to the age of the intended user of each such device. That is, even though Defendants are prohibited from providing their products to users under the age of 13, by encouraging and allowing their products to be installed indiscriminately on mobile devices, Defendants actively promote and

provide access to their products to the underage users in Missouri for whom those devices are intended.

14. Defendants have earned millions of dollars in annual revenue from their Missouri-related activities over the last several years arising from the use of their defective and inherently dangerous social media products by Missouri residents, including Plaintiff.

15. Venue is proper in this District under 28 U.S.C. § 1391(b)(2) because a substantial part of the events or omissions giving rise to Plaintiff's claims occurred in the Eastern District of Missouri.

III. PARTIES

Plaintiff

16. Plaintiff Jennifer Krull is an adult individual domiciled in Saint Louis, Missouri. Saint Louis, Missouri, is Plaintiff's true, fixed, and permanent home and principal establishment, to which Plaintiff has the intention of returning whenever she is absent therefrom. Plaintiff intends to remain in Saint Louis, Missouri, indefinitely.

17. Decedent, Carson Decus, was born on August 5, 2007, in Saint Louis, Missouri and was at all times a resident and citizen of Missouri.

18. Plaintiff, Jennifer Krull, is the mother of the deceased Carson Decus, and therefore is an heir at law and entitled to bring this action for wrongful death under MO. Stat. Ann. 537.080 1(1).

Defendant Meta Platforms, Inc.

19. Meta Platforms is a multinational technology conglomerate, having its principal place of business in Menlo Park, California. Meta develops and maintains social media platforms,

communication platforms, and electronic devices.¹ Meta Platforms was originally incorporated in Delaware on July 29, 2004, as “The Facebook, Inc.” On September 20, 2005, the company changed its name to “Facebook, Inc.” On October 28, 2021, the company assumed its current designation. While Plaintiff has attempted to identify the specific Meta Platforms subsidiary(s) that committed each of the acts alleged in this Complaint, Plaintiff was not always able to do so, in large part due to ambiguities in Meta Platforms’ and its subsidiaries’ own documents, public representations, and lack of public information. However, upon information and belief, Meta Platforms oversees the operations of its various platforms and subsidiaries, some of which have been identified and are listed below. For this reason, unless otherwise specified, the shorthand “Meta” contemplates the apparent control that Meta Platforms wields over its subsidiaries’ overall operations and, therefore, further refers to its various subsidiaries and predecessors. To the extent this assumption is incorrect, the knowledge of which Meta Platforms subsidiary, current or former, is responsible for specific conduct is knowledge solely within Meta’s possession, the details of which Plaintiff should be permitted to elucidate during the discovery phase.

20. Meta Platforms’ subsidiaries include but may not be limited to: Facebook 1 (Delaware); Facebook 2 (Delaware); Facebook 3 (Delaware); Facebook 4 (Delaware); FCL Tech Limited (Ireland); Instagram (Delaware); Novi Financial, Inc. (Delaware); Runways Information Services Limited (Ireland); Scout Development LLC (Delaware); Siculus (Delaware); and a dozen other entities whose identity or relevance is presently unclear.

Subsidiary Meta Defendants

21. Facebook 1 was incorporated in Delaware on March 11, 2020 and is a wholly

¹ These platforms and products include Facebook (its self-titled app, Messenger, Messenger Kids, Marketplace, Workplace, etc.), Instagram (and its self-titled app), and a line of electronic virtual reality devices called Oculus Quest (soon to be renamed “Meta Quest”).

owned subsidiary of Meta Platforms. Facebook 1 is primarily a holding company for entities involved in Meta Platforms' supporting and international endeavors, and its principal place of business is in Menlo Park, California. Meta Platforms is the sole member of this LLC Defendant.

22. Facebook 2 was incorporated in Delaware on January 8, 2012 and is a wholly owned subsidiary of Meta Platforms. Facebook 2 is likely a managing entity for Meta Platforms' other subsidiaries, and its principal place of business is in Menlo Park, California. Meta Platforms is the sole member of this LLC Defendant.

23. Facebook 3 was incorporated in Florida on December 10, 2010 and is a wholly owned subsidiary of Meta Platforms. Facebook 3 manages, secures, and processes payments made through Meta Platforms, among other activities, and its principal place of business is in Menlo Park, California.

24. Facebook 4 was incorporated in Delaware as "Oculus VR, LLC" on March 21, 2014, and acquired by Meta Platforms on March 25, 2014. Facebook 4's principal place of business is in Menlo Park, California, and it develops Meta Platforms' virtual and augmented reality technology, such as the Oculus Quest line of products (soon to be renamed "Meta Quest"), among other technologies related to Meta Platforms' various platforms. Meta Platforms is the sole member of this LLC Defendant.

25. Instagram was founded by Kevin Systrom and Mike Krieger in October 2010. In April 2012, Meta Platforms purchased the company for \$1 billion (later statements from Meta Platforms have indicated the purchase price was closer to \$2 billion). Meta Platforms reincorporated the company on April 7, 2012, in Delaware. Currently, the company's principal place of business is in in Menlo Park, CA. Instagram is a social media platform tailored for photo and video sharing. Meta Platforms is the sole member of this LLC Defendant.

26. Siculus was incorporated in Delaware on October 19, 2011 and is a wholly owned subsidiary of Meta Platforms. Siculus supports Meta by constructing data facilities and other projects. Siculus's principal place of business is in Menlo Park, CA.

27. By admission, Facebook and Instagram are products. (Meta's Vice President of Messaging Products Loredana Crisan, *Celebrating 10 Years of Messenger With New Features* (August 25, 2021, last visited July 29, 2022, at 1:10 PM CST) <https://about.fb.com/news/2021/08/messenger-10th-birthday/>).

28. The safety of Facebook and Instagram was not duly addressed prior to public distribution. (*Our Progress Addressing Challenges and Innovating Responsibly* (September 21, 2021, last visited July 29, 2022, at 1:17 PM CST) <https://about.fb.com/news/2021/09/our-progress-addressing-challenges-and-innovating-responsibly/>).

29. Meta knowingly exploited its most vulnerable users—children throughout the world—to drive corporate profit. Meta operates the world's largest family of social networks, enabling billions of users worldwide to connect, view, and share content through mobile devices, personal computers, and virtual reality headsets. A user does not have to pay to create an account. Instead of charging account holders to access the platform, Meta became one of the world's most valuable companies from the sale of advertisement placements to marketers across its various platforms and applications. For example, upon information and belief, Meta generated \$69.7 billion from advertising in 2019, more than 98% of its total revenue for the year. Meta can generate such revenues by marketing its user base to advertisers. Meta collects and analyzes data to assemble virtual dossiers on its users, covering hundreds if not thousands of user-specific data segments. This data collection and analysis allows advertisers to micro-target advertising and advertising dollars to very specific categories of users, who can be segregated into pools or lists

using Meta’s data segments. Only a fraction of these data segments come from content that is explicitly designated by users for publication or explicitly provided by users in their account profiles. Many of these data segments are collected by Meta through surveillance of each user’s activity on the platform and off the platform, including behavioral surveillance that users are not even aware of, such as navigation paths, watch time, and hover time. The larger Meta’s user database grows, the more time the users spend on the database. As this usage time increases, Meta is able to extract more detailed information from its users, which then allows Meta to make more money from advertisers.

30. As of October 2021, Facebook had roughly 2.91 billion monthly active users, thus reaching 59% of the world’s social networking population, the only social media platform to reach over half of all social media users. Instagram has become the most popular photo sharing social media platform amongst teenagers and young adults in the United States, with over 57 million users below the age of eighteen, meaning that 72 percent of America’s youth use Instagram. 11 percent of parents in the U.S. know their child between the ages of 9 and 11 uses Instagram.² Likewise, 6 percent of parents in the U.S. know their child between the ages of 9 and 11 uses Facebook.³

31. Two Meta products, [www.Facebook.com](https://www.facebook.com) (“Facebook”) and [www.Instagram.com](https://www.instagram.com) (“Instagram”), along with their interrelated apps (collectively “Meta 2”), rank among the most popular social networking products, with more than two billion combined users worldwide. An estimated nine out of ten teens use social media platforms, with the average teen using the platforms roughly three hours per day. Given the delicate, developing nature of the teenage brain

² Katherine Schaeffer, *7 facts about Americans and Instagram*, Pew Research Center (Oct. 7, 2021), <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

³ Id.

and Meta's creation of social media platforms designed to be addictive, it is not surprising that society is now grappling with the ramifications of Meta's growth-at-any-cost approach. A generation of children is being physiologically entrapped by products that cause long-lasting adverse impacts on their rapidly evolving and notoriously precarious mental health.

32. Meta, as originally conceived, functioned as an enormous virtual bulletin board, where authors published content. But Meta has evolved over time with the addition of numerous features and products designed by Meta to engage users. The earliest of these—the search function and the “like” button—were primarily user-controlled features. In more recent years, however, Meta has taken a more active role in shaping the user experience on the platform with more complex features and products. The most visible of these are curated recommendations, which are pushed to each user in a steady stream as the user navigates the website, and in notifications sent to the user's smartphone and e-mail addresses when the user is disengaged with the platform. These proprietary Meta products include News Feed (a newsfeed of stories and posts published on the platform, some of which are posted by your connections, and others that are suggested for you by Meta), People You May Know (introductions to persons with common connections or background), Suggested for You, Groups You Should Join, and Discover (recommendations for Meta groups to join). These curated and bundled recommendations are developed through sophisticated algorithms. As distinguished from the earliest search functions that were used to navigate websites during the Internet's infancy, Meta's algorithms are not based exclusively on user requests or even user inputs. Meta's algorithms combine the user's profile (e.g., the information posted by the user on the platform) and the user's dossier (the data collected and synthesized by Meta to which Meta assigns categorical designations), make assumptions about that user's interests and preferences, make predictions about what else might appeal to the user, and

then make very specific recommendations of posts and pages to view and groups to visit and join ,based on rankings that will optimize Meta’s key performance indicators.

33. A user’s “feed” on both Facebook and Instagram comprises an endless series of photos, videos, text captions, and comments posted by accounts that the user follows, along with advertising and content specifically selected and promoted by Instagram and Facebook.

34. Instagram also features a “discover” page, where a user is shown an endless feed of content that is selected by an algorithm designed by Instagram based upon the users’ data profile: demographics, prior activity in the platform, and other data points. Meta has added similar features to Facebook on the apps “menu” and “watch” sections.

35. Engineered to meet the evolving demands of the “attention economy”⁴—a term used to describe the supply and demand of a person’s attention, which is a highly valuable commodity for internet websites—Meta, in February 2009, introduced intermittent variable rewards (“IVR”). IVRs represent perhaps Meta’s most conspicuous effort to addict users—its “Like” button. Instagram launched that same year and came ready-made with a “Like” function shaped as a heart. Additional features of Meta’s IVR include its delay-burst notification system, comments, posts, shares, and other dopamine-triggering content. Instagram’s notification algorithm delays notifications to deliver them in spaced-out, larger bursts. Facebook likely uses a similar feature. These designs take advantage of users’ dopamine-driven desire for social validation and optimizes the balance of negative and positive feedback signals to addict users.

36. IVR is a method used to addict a user to an activity by spacing out dopamine triggering stimuli with dopamine gaps—a method that allows for anticipation and craving to

⁴ The business model is simple: The more attention a platform can pull from its users, the more effective its advertising space becomes, allowing it to charge advertisers more.

develop and strengthen the addiction with each payout. The easiest way to understand this term is by imagining a slot machine. You pull the lever (intermittent action) with the hope of winning a prize (variable reward). In the same way, you refresh Defendants' feeds, endure the brief delay, and then learn if anyone has tagged you in a photo, mentioned you in a post, sent you a message, or liked, commented on, or shared either of your posts. As explained below, Meta (and, upon information and belief, all Defendants) space out notifications into multiple bursts (dopamine gaps), rather than notifying users in real time, to maximize the platforms' addictiveness.

37. Over the past decade or so, Meta has added features and promoted the use of auto-playing short videos and temporary posts on Facebook and Instagram, with the former being referred to as "Reels," while the latter is referred to as Instagram "Stories."

38. Facebook and Instagram notify users through text and email of activity that might be of interest, which is designed to and does prompt users to open Facebook and Instagram and be exposed to content selected by the platforms to maximize the length of time and amount of content viewed by the user. Facebook and Instagram include many other harm causing features, as discussed below.

39. Equipped with ample information about the risks of social media, the ineffectiveness of its age-verification protocols, and the mental processes of teens, Meta has expended significant effort to attract preteens to its products, including substantial investments in designing products that would appeal to children ages 10-to-12. Meta views pre-teens as a valuable, unharnessed commodity, so valuable that it has contemplated whether there is a way to engage children during play dates.⁵ Meta's unabashed willingness to target children—in the face

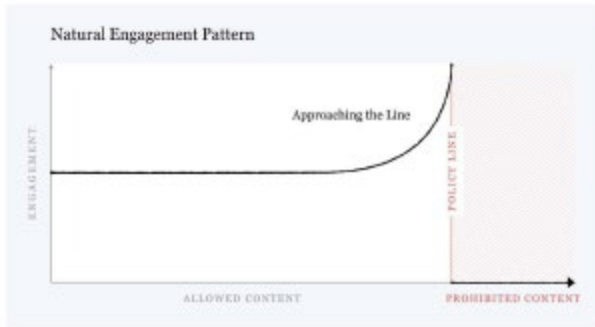
⁵ Georgia Wells and Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show* (2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

of its conscious, long-standing, plainly deficient age-verification protocols—demonstrates the depths to which Meta is willing to reach to maintain and increase its profit margin.

40. Faced with the potential for reduction in value due to its declining number of users, in or around early 2018, Meta (and likely Meta 2) revamped its interface to transition away from chronological ranking. Instead of organizing the interface according to when content was posted or sent, Meta (and likely Meta 2) prioritized Meaningful Social Interactions, or “MSI,” which emphasizes users’ connections’ interactions—e.g., likes and comments—giving greater significance to the interactions of connections that appeared to be the closest to users. To effectuate this objective, Facebook developed and employed an “amplification algorithm” to execute engagement-based ranking, which considers a post’s likes, shares, and comments, as well as a respective user’s past interactions with similar content, and exhibits the post in the user’s newsfeed if it otherwise meets certain benchmarks. The algorithm covertly operates on the proposition that intense reactions invariably compel attention. Negative content routinely elicits passionate reactions. Because the algorithm measures reactions and drives users to the most reactive content, the algorithm regularly steers users toward the most negative content.

41. Meta CEO Zuckerberg publicly recognized this in a 2018 post, in which he demonstrated the correlation between engagement and sensational content that is so extreme that it impinges upon Meta’s own ethical limits, with the following chart:⁶

⁶ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, FACEBOOK, <https://www.facebook.com/notes/751449002072082/> (last visited January 8, 2022).



42. The algorithm controls what appears in each user’s News Feed and promotes content that is objectionable and harmful to many users. In one internal report, Meta concluded that “[o]ur approach has had unhealthy side effects on important slices of public content, such as politics and news,” with one data scientist noting that “[t]his is an increasing liability.” In other internal memos, Meta concluded that because of the new algorithm, “[m]isinformation, toxicity, and violent content are inordinately prevalent.” Other documents show that Meta employees also discussed Meta’s motive for changing its algorithm—namely, that users began to interact less with the platform, which became a worrisome trend for Meta’s bottom line. Meta found that the inflammatory content that the new algorithm was feeding to users fueled their return to the platform and led to more engagement, which, in turn, helped Meta to sell more of the digital ads that generate most of its revenue. All told, Meta’s algorithm optimizes for angry, divisive, and polarizing content because such content increases its number of users and the time users stay on the platform per viewing session, which thereby increases its appeal to advertisers. This, in turn, increases Meta’s overall value and profitability.

43. Upon information in belief, at least as far back as 2019, Meta initiated, *inter alia*, a Proactive Incident Response experiment, which began researching the effect of Meta on the mental health of today’s youth.⁷ Meta’s own in-depth analyses show significant mental health issues

⁷ See *Protecting Kids Online: Testimony from a Facebook Whistleblower*, United States Senate Committee on

stemming from the use of Instagram among teenage girls, many of whom linked suicidal thoughts and eating disorders to their experiences on the app.⁸ Meta’s researchers have repeatedly found that Instagram is harmful for a sizable percentage of teens that use the platform. In an internal presentation from 2019, Meta researchers concluded that “[w]e make body issues worse for one in three teen girls,” and “[t]eens blame Instagram for increases in the rate of anxiety and depression.” Similarly, in a March 2020 presentation posted to Meta’s internal message board, researchers found that “[t]hirty-two percent of teen girls said that when they feel bad about their bodies, Instagram made them feel worse.” Sixty-six percent of teen girls and forty-six percent of teen boys have experienced negative social comparisons on Instagram. Thirteen-and-one-half percent of teen-girl Instagram users say the platform makes thoughts of “suicide and self-injury” worse. Seventeen percent of teen-girl Instagram users say the platform makes “[e]ating issues” worse. Instagram users are twice as likely to develop an eating disorder as those who don’t use social media.

44. Meta is aware that teens often lack the ability to self-regulate. Meta is further aware that, despite the platforms’ adverse impact to teenage users’ well-being, the absence of impulse control often renders teens powerless to oppose the platforms’ allure. Meta is conscious of the fact that the platform dramatically exacerbates bullying and other difficulties prevalent within the high school experience. The platform’s reach now affects users within the confines of the home. The advent of social media largely occurred after today’s parents became adults, the consequence being that a large swath of parents that lack the context needed to appreciate the contemporary perils of Meta and Instagram. Parents, therefore, are ill-equipped to offer advice sufficient to effectively

Commerce, Science, & Transportation, Sub-Committee on Consumer Protection, Product Safety, and Data Security, <https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook>.

⁸ See Wall Street Journal Staff, *The Facebook Files*, WSJ (2021), <https://www.wsj.com/articles/the-facebook-files-11631713039?mod=bigtop-breadcrumb>.

mitigate against the dangers presented by these social media platforms.

45. The shift from chronological ranking to the algorithm modified the social networking environment in such a way that it created a new iteration of the Meta experience, one that is profoundly more negative, one that exploits some of the known psychological vulnerabilities of Facebook’s most susceptible users—i.e., juveniles. This results in a markedly enlarged threat to juveniles’ mental health and the related frequency of suicidal ideation.

46. Meta professes to have implemented protective measures to counteract the well-established dangers of its sites’ customized, doggedly harmful content; however, its protocols apply only to content conveyed in English and removes only 3-to-5 percent of harmful content. Meta knows its quality-control and age-verification protocols are woefully ineffective, but Meta is either unwilling or incapable of properly managing its platforms. This is consistent with its established pattern of recognizing, and subsequently ignoring, the needs of its underage users—and its obligation to create a suitable environment accessible only by its age-appropriate users—all in the interest of reaping obscene profit.

47. Instead of providing warnings at sign-up or during use, Meta provides no warning at all. Rather, the most accessible and full information regarding the mental and physical health risks of Meta’s platforms comes from third parties. Meta has a “Youth Portal” website that does not appear to be widely promoted by Meta or even recommended to teen users on its platforms.⁹ Although the website claims to be comprehensive in its coverage of safety information for the platforms, it fails to directly address any of the features or health risks listed above. The website states, “Welcome to our Youth Portal. Consider this your guide to all things Facebook: general tips, insider tricks, privacy and safety information, and everything else you need to have a great

⁹ *Safety Center*, Facebook, <https://www.facebook.com/safety/youth> (last visited Sept. 20, 2022)

experience on Facebook. It's also a space for you to hear from people your age, in their own voices, about the issues that matter to them online. Take a look around — these resources were made specifically for you, your friends, and your real-life experiences online and off.”¹⁰ The website merely provides instructional guides regarding mental health in general—it does not identify, warn, or take responsibility for the impact of the platform and its features on users’ mental health. By contrast, it shifts blame to other factors, such as third parties posting “suicide challenges,” the general societal issue of substance abuse, and the COVID-19 pandemic.

48. The only content on the website that has a semblance of a warning for the issues listed above is a link to a “Family Digital Wellness Guide” created by the Boston Children’s Hospital Digital Wellness Lab. Buried in this guide is a mention that screens should not be used an hour before bed because “[u]sing screens before bedtime or naptime can excite kids and keep them from falling asleep. The ‘blue light’ that comes from TVs and other screen devices can disrupt your child’s natural sleep cycle, making it harder for them to fall asleep and wake up naturally. [Late screen use can] result[] in your child getting less sleep and struggling to wake up on time. On average, school-age children need 9-12 hrs of sleep each night.”

49. The “Family Digital Wellness Guide” only alludes to the platforms’ manipulation, addictiveness, behavioral control, and data tracking of users: “Advertisers target children with lots of commercials, everything from sneakers and toys to unhealthy foods and snacks high in fat, sugar, and calories. Your children may also start becoming familiar with online influencers, who are also often paid to advertise different products and services on social media. Helping your child think critically about how advertising tries to change behaviors, helps your child understand the purpose of ads, and empowers them to make informed decisions.” The guide also briefly discusses

¹⁰ *Id.*

cyber bullying.

50. Finally, the guide mentions the body image harms social media inflicts, but it solely blames influencers as the cause, rather than the platforms' algorithms and features, and asserts that the burden to remedy the issue is on parents, rather than social media companies. "Science says: Tweens are often exposed to a lot of information online and through other media, both true and false, about how bodies 'should' look and what they can do to 'improve' their appearance. Certain body types are often idolized, when in reality bodies are incredibly diverse. There are many online accounts, websites, and influencers that make youth feel inadequate by encouraging them to lose weight or build up muscle, harming both their mental and physical health. Protip: Actively listen and show that you care about how your child is feeling about puberty and how their body is changing. Talk with them about images on social and other media as these often set unrealistic ideals and help them understand that these images are often digitally altered or filtered so that people look more 'beautiful' than they really are." No similar warning is offered to young users in Meta's advertisements, at signup or anywhere on the platform. Instead, Meta unreasonably and defectively leaves it to individuals' research ability for a user to be informed about the key dangers of its platforms.

51. This informational report is from a third party, not Meta. Meta merely links to this information on a "Youth Portal" website in a location that is difficult and time-consuming to find. The guide omits any mention of the strong role that Facebook's and Instagram's individual or collective algorithm(s) and features play in each of these harms. Furthermore, it is uncertain how long Meta has offered a link to this limited information.

52. On another Meta created website that proposes to "help young people become empowered in a digital world," its "Wellness" subpage lists five activities: "mindful breathing,"

“finding support,” “building resilience: finding silver linings,” “a moment for me,” and “taking a break.”¹¹ Nowhere does the website mention the mental health risks posed by Facebook and Instagram as a result of the product features listed above.

Defendant Snap, Inc.

53. Snap is a Delaware corporation with its principal place of business in Santa Monica, California. Snap owns and operates the Snapchat social media platform, an application that is widely marketed by Snap and available to users throughout the United States. Snapchat is a platform for engaging in text, picture, and video communication. The platform is also for editing and dissemination of content. The app contains a discovery page and a TikTok-like short video feed that algorithmically presents endless content to users. The platform’s primary objective is to maximize the frequency and length of each user’s viewing sessions. 59 percent of teenagers in the U.S. actively use Snapchat.¹² 22 percent of parents in the U.S. know that their child between the ages of 9 and 11 uses Snapchat.¹³

54. Snapchat was founded in 2011 by three Stanford students: Reggie Brown, Evan Spiegel, and Bobby Murphy. It began as a simple application designed to allow a user to send a picture to a friend that would later disappear. Having gained only 127 users a few months after its launch, Snapchat began to market to high school students. Within the following year, Snapchat grew to more than 100,000 users.

55. Snapchat became well known for the ephemeral nature of its content, which, in effect, removes all accountability for sent content. Specifically, Snapchat allows users to form groups and share posts (or “Snaps”) that disappear after being viewed by the recipients. However,

¹¹ *Wellness*, Meta, <https://www.facebook.com/fbgetdigital/youth/wellness> (last visited Sept. 20, 2022).

¹² *Vogels et al.*, *supra* note 13.

¹³ *Schaeffer*, *supra* note 2

the Snapchat social media product quickly evolved from there, as its leadership made design changes and rapidly developed new product features. These changes were intended to, and did, increase Snapchat's popularity among minors.

56. In 2012, Snapchat added video capabilities to its product, pushing the number of Snaps to 50 million per day; in 2013, Snapchat added "Stories" and "Chat" features; in 2014, it added live video chat capabilities, text conversations, "Our Story," Geofilters, and Snapcash; in 2015, it added Discovery, QR code incorporation, and facial recognition software; in 2016, it added Memories and Snapchat Groups.

57. Upon knowledge, information, and belief, formed after a reasonable inquiry under the circumstances, by 2015, advertisements were pervasive on Snapchat, and by 2018, 99% of Snapchat's total revenue came from advertising. Like Meta and Defendants in general, Snapchat decided to monetize its userbase. Snapchat changed its product in ways that made it more harmful for users yet resulted in increased engagement and profits for Snapchat. By 2015, Snapchat had over 75 million active users and was the most popular social media application amongst American teenagers in terms of number of users and time spent using the product.

58. To further expand its userbase, Snapchat incorporates several product features that serve no purpose other than to create dependency on Snapchat's social media product. These features, in turn, result in sleep deprivation, anxiety, depression, shame, interpersonal conflicts, and other serious mental and physical harms. Snapchat knows, or should know, that its product is harmful to adolescents, but, as with Defendants in general, it consistently opts for increased profit at the expense of the well-being of its clientele. Defendants' products are used by millions of children every day. Numerous children have become addicted to these products because of their design and product features, to the point that parents cannot remove all access to the products

without minor users adamantly protesting, often engaging in self-harm, threatening hunger strikes and/or suicide, and other foreseeable consequences of withdrawal from these products, where such cessation would require professional intervention.

59. In addition to the types of features discussed above, Snapchat's defective, addictive, harm-causing features include (1) Snapchat streaks, (2) limited availability content, (3) Trophies, (4) Snapscore, (5) Snapmap (6) image filters, (7) Spotlight, (8) general user interface, and (9) many other design features.

60. Snapchat streaks provide a reward to users based on how many consecutive days they communicate with another user. In other words, the longer two users are able to maintain a streak by exchanging a communication (a "Snap") at least once a day, the more rewarded the users are. The reward comes in the form of a cartoon emoji appearing next to the conversation within Snapchat's interface. The longer the streak is maintained, the more exciting the emoji. Eventually, the emoji will change to a flame, and the number of days the streak has lasted will be positioned next to the flame. If the streak is about to end, the emoji changes to an hourglass to add pressure on users to maintain the streak and reengage with the platform.¹⁴

61. This feature hijacks teens' craving for social success and connectedness and causes teen users to feel a pressure to use Snapchat daily or suffer social consequences. As some academics and mental health treatment providers have described, streaks "provide a validation for the relationship. ... Attention to your streaks each day is a way of saying 'we're OK.' ... The makers built into the app a system so you have to check constantly or risk missing out," said Nancy Colier, a psychotherapist and author of *The Power of Off*. "It taps into the primal fear of exclusion, of being

¹⁴ Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017 at 5:00 AM CST), <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker?leadSource=verify%20wall>.

out of the tribe and not able to survive.”¹⁵ For teens, streaks can become a metric for self-worth and popularity. By design, the user’s mental wellbeing becomes connected to performance in Snapchat’s product.¹⁶ Some teenagers even provide their log-in information to others to maintain their streaks for them when they know they will not be able to do so for a time.

62. Time limited content also creates a pressure to use the platform daily. Users can post stories that will only be available for 24 hours. Many teens feel an obligation to view all their contact’s stories each day before the content disappears.

63. Trophies are awarded to users based on actions performed in the app, such as reaching streaks of certain milestone lengths or using different portions of the app. Each trophy is a unique badge to display on a user’s profile.

64. All users receive a “Snapscore,” based on their total number of snaps sent and received. Users can see the scores of friends, causing blows to the self-esteem of many young users and an addictive drive to increase the score.

65. “Snap Map,” a feature of Snapchat that shows the location of other users on a map, also causes self-esteem and mental health damage to teens. The human desire to belong to an “ingroup” is powerfully connected to self-worth, especially within teens. In a recent study, young respondents reported that they check Snap Map to see where their friends were to avoid exclusion, followed by an increased amount of anxiety. Snap Map allows users to view content constantly with minimal effort and to check the application to see what they potentially are missing out on. [A]dolescent users reported feeling “sad,” “inadequate,” and “isolated” after checking Snap Map, even if they were attempting to avoid these feelings in the first place. [P]articipants who were

¹⁵ Id.

¹⁶ Yael Klein, *How Snapchat Streaks Are Getting Teens Addicted to the App*, Evolve Treatment Centers, <https://evolvvetreatment.com/blog/snapchat-streaks-addicted-teens/> (last visited Sept. 9, 2022) (quoting one teen, “having more streaks makes you feel more popular.”).

unsure of their friends' whereabouts or felt excluded (the uncertain situation), were compelled to check Snap Map and reported experiencing higher levels of anxiety and low-self-esteem after doing so. This evaluation of self-worth translates to the participant checking Snap Map to confirm or deny their beliefs, and then experiencing negative emotional responses after making a comparison to their friends' location. Snap Map ... [is] associated with increased feelings of jealousy and anger in users. Participants expressed how immediate access to locational information directly impacted their mood, especially when they saw something that confirmed their doubts. Something interesting to note is that even when participants were aware of the negative feelings that could arise after checking Snap Map, their desire to confirm or deny self-doubt exceeded concerns over these potential consequences.¹⁷ Moreover, this feature can be dangerous for naïve users in that predators can easily locate targeted victims at any given moment.

66. Snapchat also includes many appearance changing and face altering image filters that have inflicted profound body image issues upon teenagers, especially females.

67. In November 2020, Snapchat launched "Spotlight." This portion of the platform functions and appears nearly identical to TikTok, with similar addictive qualities and harm infliction. Snapchat also has a "Discover" page that presents a mosaic of algorithmically recommended content. Once a user subscribes to another user based on what they see on the Discover page, they can see the other user's stories from that point forward. Unsurprisingly, one study of over 2,000 UK residents found 68 percent of respondents who used Snapchat reported that "the platform prevented them from sleeping."¹⁸

¹⁷ Jenna Sachs, *Psychological Repercussions of Location-Based Social Networks in Today's Youth*, 9 *Elon J. of Undergraduate Res. in Comm.* 64, 73 (2018), <https://eloncdn.blob.core.windows.net/eu3/sites/153/2018/12/06-Sachs.pdf>.

¹⁸ Frazer Deans, *Curb Your Snapchat Addiction*, <https://www.wholesome.design/advent-2018/2-curb-your-snapchataddiction/> (last visited Sept. 20, 2022).

IV. GENERAL FACTUAL ALLEGATIONS

A. Teenagers Are Particularly Vulnerable to the Perils of Excessive Social Media Use.

68. Emerging research shows that the human brain is still developing during adolescence in ways consistent with adolescents' demonstrated psychosocial immaturity. Specifically, adolescents' brains are not yet fully developed in regions related to risk evaluation, emotion regulation, and impulse control. The frontal lobes—and, in particular, the prefrontal cortex—of the brain play an essential part in higher-order cognitive functions, impulse control, and executive decision-making. These regions of the brain are central to the process of planning and decision-making, including the evaluation of future consequences and the weighing of risk and reward. They are also essential to the ability to control emotions and inhibit impulses. MRI studies have shown that the prefrontal cortex is one of the last regions of the brain to mature. During childhood and adolescence, the brain is maturing in at least two major ways. First, the brain undergoes myelination, the process through which the neural pathways connecting different parts of the brain become insulated with white fatty tissue called myelin. Second, during childhood and adolescence, the brain is undergoing “pruning”—the paring away of unused synapses, leading to more efficient neural connections. Through myelination and pruning, the brain's frontal lobes change to help the brain work faster and more efficiently, improving the “executive” functions of the frontal lobes, including impulse control and risk evaluation. This shift in the brain's composition continues throughout adolescence and into young adulthood. In late adolescence, important aspects of brain maturation remain incomplete, particularly those involving the brain's executive functions and the coordinated activity of regions involved in emotion and cognition. As such, the part of the brain that is critical for control of impulses and emotions and mature, considered decision-making is still developing during adolescence, consistent with the

demonstrated behavioral and psychosocial immaturity of juveniles.

69. Because adolescence is the period when sophisticated, essential inhibitory control functions are being established, the onset of prolonged exposure to toxic content during adolescence is particularly concerning. The extended development of the prefrontal cortex results in an adolescent brain that is largely undeveloped, highly malleable, and overwhelmingly vulnerable to long-term, irremediable effects of adverse influences, including addiction and a fractured psychological well-being.

70. The algorithms in Defendants' social media products exploit minor users' diminished decision-making capacity, impulse control, emotional maturity, and psychological resiliency caused by users' incomplete brain development. Defendants know, or in the exercise of reasonable care should know, that because their minor users' frontal lobes are not fully developed, such users are much more likely to sustain serious physical and psychological harm through their social media use than adult users. Nevertheless, Defendants have failed to design their products with any protections to account for and ameliorate the psychosocial immaturity of their minor users.

71. Adolescents see themselves as increasingly unique. Paradoxically, as part of their individuation, they conform by faithfully mimicking the behavior of peers. Indeed, in defining their own emerging identity, adolescents aspire to be viewed as mature adults, and this leads them to affiliate with and emulate the personalities, images, behaviors, and preferences of those that they would like to become. During the teenage years, relationships with family members often take a back seat to peer groups and appearance. Teens crave to identify with their peer group, achieve social approval, and become "popular." Many teens feel deep insecurity and are self-conscious. They feel people are constantly focused on them, examining them, and judging them

about everything they say and do. They struggle with the inexorable desire to be accepted and admired by their teen peers, and their biggest fear is to not fit in. This myopic desire to fit in predisposes teenagers to frequently engage in upward social comparison processes—that is, identifying and observing others that appear to be experiencing more positive outcomes, and consequently feeling worse about themselves and their own perceived shortcomings.

72. Today’s adolescents are part of Generation Z (which is loosely defined as people born between 1997 and 2012). They are the first generation of consumers to have grown up in an entirely post-digital era, and thus are “digitally native.” The oldest members of this demographic cohort are just turning 24 this year; however, the substantial majority are believed to be still going through adolescence. Members of Generation Z spend upwards of three hours per day on the internet, and another three hours per day using social media. According to a 2018 survey by Pew Research Center, 45 percent of high school students said they used a social media platform daily, and 24 percent said that they were online “almost constantly.”¹⁹

73. One way that Defendants addict minors is when minors use design features such as Meta’s “likes,” which cause their brains to release euphoria-causing dopamine. However, as soon as dopamine is released, their euphoria is countered by dejection: minor users’ brains adapt by reducing or “downregulating” the number of dopamine receptors that are stimulated. In normal stimulatory environments, neutrality is restored after this dejection abates. However, Meta’s algorithms are designed to exploit users’ natural tendency to counteract dejection by going back to the source of pleasure for another dose of euphoria. Each of Defendants’ platforms have similar product features that virtually have the same effect as Meta’s.

74. Eventually, as this pattern continues over a period of days, weeks, and months, the

¹⁹ Monica Anderson & JingJing Jiang, *Teens, Social Media and Technology*, Pew Research Center (February 3, 2022), <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/>.

neurological baseline to trigger minor users' dopamine responses increases. Minors then continue to use these platforms not for enjoyment, but simply to feel normal. When minor users attempt to stop using Defendants' social media products, they experience the universal symptoms of withdrawal from any addictive substance, including anxiety, irritability, insomnia, and craving.

75. Addictive use of social media by minors is psychologically and neurologically analogous to addiction to internet gaming disorder. Gaming addiction is a recognized in the American Psychiatric Association's 2013 Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (used by mental health professionals to diagnose mental disorders) and is a recognized mental health disorder by the World Health Organization and International Classification of Diseases. The diagnostic symptoms of social media addiction among minors are the same as the symptoms of addictive gaming promulgated in DSM 5 and include:

- a. Preoccupation with social media and withdrawal symptoms (sadness, anxiety, irritability) when device is taken away or use is not possible (sadness, anxiety, irritability).
- b. Tolerance, the need to spend more time using social media to satisfy the urge.
- c. Inability to reduce social media usages, unsuccessful attempts to quit gaming.
- d. Giving up other activities, loss of interest in previously enjoyed activities due to social media usage.
- e. Continuing to use social media despite problems.
- f. Deceiving family members or others about the amount of time spent on social media.
- g. The use of social media to relieve negative moods, such as guilt or hopelessness; and

- h. Jeopardizing school or work performance or relationships due to social media usage.

76. Defendants' advertising profits are directly tied to the amount of time that its users spend online. Thus, Defendants enhance advertising revenue by maximizing users' time online through a product design that addicts them to the platform, in part by directing them to content that is progressively more stimulating. However, reasonable minor users and their parents do not expect that online social media platforms are psychologically and neurologically addictive.

77. Defendants' products could feasibly report the frequency and duration of their minor users' screen time to their parents at negligible cost. This would enable parents to track the frequency, time, and duration of their minor child's social media, identify and address problems arising from such use, and better exercise their rights and responsibilities as parents.

78. Social comparisons on social media are frequent and are especially likely to be upward, as social media provides a continuous stream of information about other people's accomplishments.²⁰ Past research suggests that social comparisons occur automatically; when individuals encounter information about another person, their own self-perceptions will be affected. The sheer number of posts in a News Feed, each offering a thumbnail sketch of each person's carefully curated and predominantly ostentatious content, yields numerous opportunities for social comparison. Although people do not typically post false information about themselves online, they do engage in selective self-presentation and are more likely to post eye-catching content. As a result, individuals browsing their News Feeds are more likely to see posts about friends' exciting social activities rather than dull days at the office, affording numerous

²⁰ Jin Kyun Lee, *The Effects of Social Comparison Orientation on Psychological Well-Being in Social Networking Sites: Serial Mediation of Perceived Social Support and Self-Esteem*, *Current Psychology* (2020), <https://link.springer.com/content/pdf/10.1007/s12144-020-01114-3.pdf>.

opportunities for comparisons to seemingly better-off others. Individuals with vacillating levels of self-esteem and certitude, characteristics notoriously endemic to the teenage cohort, are particularly oriented to making frequent and extreme upward social comparisons on social media, which in turn threatens their mental health. Social-media-induced social comparison often results in a discrepancy between the ideal self and the real self, thus evoking a sense of depression, deprivation, and distress, resulting in an overall aggravation of one's mental state.²¹ Since the early 2000s, studies have shown that frequent upward social comparison results in lower self-esteem and reduced overall mental health.²² It has also long been known that individuals who are more likely to engage in self-comparison are likewise more likely to have negative outcomes when using social media. To cope with wavering self-esteem, digitally native adolescents often become envious of others and resort to cyberbullying to deconstruct the point of comparison's perceived superiority and preserve an increasingly delicate ego. These natural dynamics in youth are exacerbated to psychologically injurious levels by Defendants' platforms' progressively toxic environment, which is discussed in further detail below.

79. Defendants' products contain image altering filters that cause mental health harms in multiple ways.²³ First, because of the popularity of these editing tools, many of the images

²¹ This schism between the ideal self and the real self, and the attendant dissatisfaction with reality, is further exacerbated by Meta's use of physical-augmentation technology, which allows users to utilize photo and video filters to make remove blemishes, make the face appear thinner, and lighten the skin-tone, all to make themselves appear more "attractive."

Appearance-altering filters are widely-used across Defendants' platforms. Many filters are designed to make users appear more attractive, according to criteria developed by Defendants—they remove blemishes, make the face appear thinner, and lighten skin-tone. Especially in combination with the platforms' general-feed algorithm, these filters can cause users to make false comparisons between their real-life appearances and the appearances of the people they see in Facebook and Instagram content. These features can also cause users to make negative comparison between their appearance with a filter and without one. As discussed below, Meta has long been aware of the harm these features can cause

²² Claire Midgley, *When Every Day is a High School Reunion: Social Media Comparisons and Self-Esteem* (2020), https://www.researchgate.net/publication/342490065_When_Every_Day_is_a_High_School_Reunion_Social_Media_Comparisons_and_Self-Esteem.

²³ Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way*

teenagers see have been edited by filters. It can be difficult for teenagers to remain cognizant of the use of filters while viewing content, resulting in a false reality where all other users on the platforms appear better looking than they are. By comparing their real-life appearance to the edited appearance of others online, teens' perception of their physical features become negative. Second, teenagers often prefer the way they look using filters, noticing an increase in interaction and positive responses when their photos are edited with filters. Many young users believe they are only attractive when their images are edited, not as they appear naturally. Third, the specific changes filters make to individuals' appearance can cause negative obsession or self-hatred surrounding aspects of their appearance. The filters alter specific facial features such as eyes, lips, jaw, face shape, face slimness, etc.—features that often require medical intervention to alter in real life.

80. In a 2016 study, 52 percent of girls said they use image filters every day, and 80 percent have used an app to change their appearance before the age of 13.²⁴ In fact, 77 percent of girls reported trying to change or hide at least one part of their body before posting a photo of themselves, and 50 percent believe they did not look good without editing.²⁵ Filters, especially in combination with other product features, directly cause body image issues, eating disorders, body dysmorphia, and related issues.²⁶ As one study of 481 university students found, spending more

We See Ourselves, Forbes (Apr. 27, 2021 at 1:19 PM EDT), <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>.

²⁴ *Id.*

²⁵ Haines, *supra* note 36 (“In October, Instagram announced that it would be removing “all effects associated with plastic surgery” from its filter arsenal, but this appears to mean all effects explicitly associated with plastic surgery, such as the ones called “Plastica” and “Fix Me.” Filters that give you Instagram Face will remain.”).

²⁶ See Sian McLean, Susan Paxton, Eleanor Wertheim, & Jennifer Masters, *Photoshopping the selfie: Self photo editing and photo investment are associated with body dissatisfaction in adolescent girls*, 48 Int'l J. of Eating Disorders 1132, 1133 (Aug. 27, 2015), <https://pubmed.ncbi.nlm.nih.gov/26311205/> (presenting a 2015 study involving 101 adolescent girls, more time spent editing and sharing selfies on social media raised their risk of experiencing body dissatisfaction and disordered eating habits.); Jing Yang, Jasmine Fardouly, Yuhui Wang, & Wen Shi, *Selfie-Viewing and Facial Dissatisfaction among Emerging Adults: A Moderated Mediation Model of Appearance Comparisons and Self-Objectification*, 17 Int'l J. of Env't Res. and Pub. Health 672, 672 (Jan. 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013747/>; Scott Griffiths, Stuart Murray, Isabel Krug, & Sian McLean, *The Contribution of Social Media to Body Dissatisfaction, Eating Disorder Symptoms, and Anabolic*

time viewing selfies can increase dissatisfaction with one's own face, spending more time looking at selfies (and reviewing their likes and comments) can cause users to draw more comparisons between themselves and others, prompting even more self-criticism.²⁷ Relatedly, a psychodermatologist stated, "these apps subconsciously implant the notion of imperfection and ugliness generating a loss of confidence."²⁸

81. In another recent study, even users that report a higher initial level of self-esteem felt they looked 44 percent worse before their image was edited using a filter. When a filter increases a gap between how individuals want to look and how they believe they actually look, it "reduces their self-compassion and tolerance for their own physical flaws."²⁹

82. The dangers associated with teenagers' engagement in upward social comparison while on social media is compounded by Defendants' deft and discreet construction of an atmosphere capable of exploiting the impulse control issues of even the most mature adults. Thus, Defendants' product is predictably highly addictive. Meta's products have key components that make the platforms highly addictive, including IVR and its Facial Recognition System ("FRS"). Upon information and belief, each of Defendants' products utilize similar technology.

83. Other psychological manipulations used to intertwine social media users include, but are not limited to: (1) the FRS system, which has already collected for distribution to various third parties a billion individual facial recognition templates and is otherwise used by Meta to identify and tag people in photos; (2) how Meta, in particular, uses wavy dots to reflect that

Steroid Use Among Sexual Minority Men, 21 *Cyberpsychology Behavior, and Soc. Networking* 149, 149 (Mar. 1, 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/>.

²⁷ Yang et al., *supra* note 39.

²⁸ Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn't Be Ignored – Here's Why*, *InStyle* (Sept. 14, 2022 at 2:05PM), <https://www.instyle.com/beauty/social-media-filters-mental-health>.

²⁹ Ana Javornik, Ben Marder, Marta Pizzetti, & Luk Warlop, *Research: How AR Filters Impact People's Self-Image*, *Harvard Business Review* (December 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

someone is currently writing you a message, which is designed to keep you on the platform until you receive the message or shorten the time for you to return and check for a message; and (3) the concept of social reciprocity, a variance of quid pro quo, pursuant to which Meta alerts you when someone has read your message, which encourages the receivers to respond—because the sender knows the message has been read—and simultaneously prompts the sender to return to check for the seemingly inevitable response. In sum, this perilous amalgamation of intense psychological vulnerability and targeted exploitation foreseeably causes various harms for today’s youth, including, but not limited to, social media addiction; withdrawal from friends, family, and social and academic advancement; lack of focus; anxiety; body dysmorphia; eating disorders; death resulting from eating disorders; depression; difficulty sleeping; fatigue; headaches; migraines; loss of vision; eye strain; self-harm; and suicide.

B. Known and Unknown Product Defects

84. Upon information and belief, all three of Defendants’ platforms (Facebook, Instagram, and Snapchat) have been designed, maintained, and constantly updated by some of the most wealthy, powerful, and sophisticated corporations in the world. Large teams of expert data scientists, user experience (“UX”) researchers, and similar professionals have spent years fine tuning each platform to addict users. Every aspect of each platforms’ interface, each layer of its subsurface algorithms and systems, and each line of underlying code, has been crafted by extraordinarily brilliant minds. Every detail—the color of app icons, the placement of buttons within the interface, the timing of notifications, etc.—is designed with the goal of increasing the frequency and length of use sessions. Many product features, such as the innerworkings of algorithms, are secret and unobservable to users. Therefore, it is impossible to create a comprehensive list of addictive, harm-causing defects in the platforms until in-depth discovery takes place. Discovery

throughout litigation will support further elaboration regarding the specifics of product defects.

85. However, across all platforms, features that make the products addictive and likely to cause the mental and physical health harms include, but are not limited to: (1) engagement-based ranking (sorting content on a user’s feed based on engagement or “meaningful social interactions” rather than chronology); (2) intermittent variable rewards (a system of “likes”, comments, strategically-timed notifications, promoting the content of new users and users who have not posted in a while, among other features); (3) face tracking and augmentation (*i.e.*, photo and video filters designed to make users appear more attractive); (4) endless scrollable content (especially auto-playing video content such as the Instagram “Reels” content feed); (5) limits to content length, (6) notifications, (7) interface design decisions (such as button placement), (8) autoplay, (9) hand-reflex conditioning UX design, (10) content stockpiling (such as “saving” videos in TikTok, Snapchat Memories, etc.), (11) the interaction of these features³⁰; and (12) other features of the platform that are currently unknown and hidden from users and governments.

86. Many of these features take advantage of psychological principles such as “loss aversion” (the principle that people prefer avoiding losses to acquiring equivalent gains), the “sunk cost fallacy” (the more people invest in something, the more likely they are to continue that behavior), and gamification (“The application of typical elements of game playing (e.g., point scoring, competition with others, rules of play) to other areas of activity, typically as an online marketing technique to encourage engagement with a product or service.”).³¹ Gamification in these social media platforms is used with the objective of maximizing corporate profits through user-engagement, to the detriment of user health. Interestingly, the same principles of gamification have

³⁰ The features have a distinct and harsher impact when they interact – for example, becoming addicting to Instagram through variable rewards lengthens use time and increases the impact of harmful beauty standards from “pretty” filters

³¹ *Gamification*, Ascio, <https://ascio.ca/gamification> (last visited Sept. 20, 2022).

been used with the sole objective of improving user mental health in mental health treatment platforms such as Beanfee.³²

C. Defendants Knowingly Exploit Teenage Vulnerabilities for Unjust Gain

87. Enacted in 1998 and finalized by a U.S. Federal Trade Commission rulemaking in 2000, the Children’s Online Privacy Protection Act, or “COPPA,” regulates the conditions under which commercial web sites that either target children under age 13 or have actual knowledge of children under age 13 using their site can collect and use information about them. As a result of COPPA, website operators must obtain “verifiable parental consent” from parents prior to the collection and use of information about children under age 13. Defendants have chosen to avoid these obligations by purporting to ban all those younger than 13 through its terms of service.

88. Defendants state that children under the age of thirteen are prohibited from using their products, but Defendants knowingly lack effective age-verification protocols. To date, this problem has largely been unaddressed. For example, since at least 2011, Meta has known that its age-verification protocols are largely inadequate, then estimating that it removes 20,000 children under age 13 from Facebook every day. Meta claims to have removed at least six hundred thousand underage users in 2021. However, Zuckerberg himself has stated that, notwithstanding the spirit of COPPA, younger children should be allowed to get on Facebook.

D. Defendants’ Business Models Encourage Problematic Use to Maximize Screen Time, Thereby Increasing Revenue.

89. Defendants advertise their products as “free” because they do not charge their users for downloading or using their products. But many users do not know that Defendants make a profit

³² The Beanfee Team, *Why are Snapchat streaks so Addictive*, Beanfee (Aug. 28, 2021), <https://beanfee.com/articles/why-are-snapchat-streaks-so-addictive/> (“Our prototype has now been in testing with various schools and mental health institutions for over a year and is already yielding great results.”).

by finding unique and increasingly dangerous ways to capture user attention, acquire data about users, and target advertisements to their users. Defendants receive revenue from advertisers who pay a premium to target advertisements to specific demographic groups of users in the applications. The amount of revenue Defendants receive is based on the amount of time and level of user engagement on their platforms, which directly correlates with the number of advertisements that can be shown to each user. Defendants design features are not necessary to maximize the communicative utility of the applications, but instead seek to exploit users' susceptibility to persuasive design and unlimited accumulation of unpredictable and uncertain rewards (such as "likes," "followers," "views," "streaks," "trophies," and "charms"). Defendants use unknown and changing incentives that, by design, prompt users to consume their social media products in excessive and dangerous ways. Defendants know, or in the exercise of ordinary care should know, that their designs have created extreme and addictive usage by their minor users, and Defendants knowingly or purposefully designed its products to encourage such addictive behaviors. For example, Snapchat users do not know all the possible achievements they can unlock, and some are unlocked on inconsistent and unpredictable schedules. This design conforms to well-established principles of operant conditioning wherein intermittent reinforcement provides the most reliable tool to maintain a desired behavior over time. This design is akin to a slot machine but is marketed toward minor users, who are even more susceptible than gambling addicts to Defendants' variable reward and notification systems. Instagram's "pull to refresh" feature is also based on how slot machines operate. This Instagram feature creates an endless feed, designed to manipulate brain chemistry and prevent natural end points that would otherwise encourage users to move on to other activities. According to industry insiders and whistleblower(s), Defendants have employed a multitude of psychologists and engineers to help make their products maximally addicting.

90. Defendants did not warn users of the addictive designs of their products. To the contrary, Defendants actively conceal the dangerous and addictive nature of their platforms, consistently minimizing in public statements and in advertising the negative effect that the products have on users.

E. Plaintiff Expressly Disclaims Any and All Claims Seeking to Hold Defendants Liable as the Publisher or Speaker of Any Content Provided, Posted, or Created by Third Parties.

91. Plaintiff seeks to hold Defendants accountable for their own alleged acts and omissions. Plaintiff's claims arise from Defendants' status as the designer and marketer of dangerously defective social media products, not as the speaker or publisher of third-party content.

92. Plaintiff alleges that Defendants failed to warn minor users and their parents of known dangers arising from anticipated use of their social media platforms. None of Plaintiff's claims rely on treating Defendants as the publisher or speaker of any third party's words. Plaintiff's claims seek to hold Defendants accountable for their own allegedly wrongful acts and omissions, not for the speech of others or for any attempts by Defendants to restrict access to objectionable content.

93. Plaintiff is not alleging that Defendants are liable for what third parties have said, but rather, for what Defendants did or did not do.

94. None of Plaintiff's claims for relief set forth herein require treating Defendants as a speaker or publisher of content posted by third parties. Rather, Plaintiff seeks to hold Defendants liable for their own speech, deliberate decisions, and their own silence in failing to warn of foreseeable dangers arising from the anticipated use of their products. Defendants could manifestly fulfill their legal duty to design reasonably safe products and furnish adequate warnings of foreseeable dangers arising out of their products, without altering, deleting, or modifying the

content of a single third-party post or communication.

V. PLAINTIFF-SPECIFIC ALLEGATIONS

95. Plaintiff Jennifer Krull is the mother of the Carson Decus, a child who died by suicide after becoming a heavy user of Defendants' platforms.

96. Shortly after registering to use Defendants' platforms, Carson began engaging in addictive and problematic use of the platform(s). Carson's interest in any activity other than viewing and posting on Defendants' platforms progressively declined.

97. Carson, like many, was a pre teen when he began using social media as a means of communication and connection. At age 14 he took his own life.

98. Prompted by the addictive design of Defendants' product(s), and the constant notifications that Defendants' platform(s) pushed to Carson 24 hours a day, Carson developed a compulsion to engage with Defendants' platforms, and began getting less and less sleep.

99. As a proximate result of his compulsion to interact with Defendants' platforms, and specifically due to recommendations and content Defendants selected and showed to him, Carson developed depression and anxiety, which would ultimately lead to his death by suicide.

100. Carson had never been diagnosed with an underlying mental disease or disorder, and his suicide was a massive shock to his family, including Plaintiff, Jennifer Krull.

101. Plaintiff Krull, Carson's mother, reports that one of the last actions Carson took on this earth was to utilize the Snapchat platform. Due to the ephemeral nature of the platform, we may never be able to know what Carson saw, sent, or said on this app in his final moments.

102. Defendants have designed their platforms(s) to allow minor users, including Carson, to become addicted to and abuse their products without the consent of the users' parents.

103. Defendants have specifically designed their platform(s) to be attractive nuisances

to underage users, while failing to exercise the ordinary care owed to underage business invitees to prevent the rampant, foreseeable, and deleterious impacts on minor users that access Defendants' platforms.

104. Neither Carson nor Plaintiff was aware of the addictive and mentally harmful effects of Defendants' platforms when Carson began to use the products. Defendants not only failed to warn Plaintiff of the dangers of social media compulsion, sleep deprivation, and problematic use of Defendants' platforms, but they also misrepresented the safety, utility, and non-addictive properties of their products. For example, the head of Instagram testified under oath at a December 8, 2021, Senate Committee hearing that Instagram does not addict its users. Indeed, Meta intentionally designed Facebook and Instagram to elicit intermittent dopamine releases within users' brains, a behavior modification scheme devised to surreptitiously ensnare users in an infinite loop of platform use and dopamine withdrawal:

When Facebook was getting going, I had these people who would come up to me and they would say, 'I'm not on social media.' And I would say, 'OK. You know, you will be.' And then they would say, 'No, no, no. I value my real-life interactions. I value the moment. I value presence. I value intimacy.' And I would say . . . 'We'll get you eventually.' I don't know if I really understood the consequences of what I was saying, because [of] the unintended consequences of a network when it grows to a billion or 2 billion people and . . . it literally changes your relationship with society, with each other . . . It probably interferes with productivity in weird ways. God only knows what it's doing to our children's brains. The thought process that went into building these applications, Facebook being the first of them . . . was all about: 'How do we consume as much of your time and conscious attention as possible? And that means that we need to sort of give you a little dopamine hit every once in a while, because someone liked or commented on a photo or a post or whatever. And that's going to get you to contribute more content, and that's going to get you . . . more likes and comments.' It's a social-validation feedback loop . . . exactly the kind of thing that a hacker like myself would come up with, because you're exploiting a vulnerability in human psychology. The inventors, creators—it's me, it's Mark [Zuckerberg], it's Kevin Systrom on Instagram, it's all of these people—understood this consciously. And we did it anyway.

Ellie Silverman, *Facebook's First President, on Facebook*: “God only knows what it’s doing to

our children's brains" (November 9, 2017, last visited July 29, 2022, at 1:54 PM CST) <https://www.washingtonpost.com/news/the-switch/wp/2017/11/09/facebooks-first-president-on-facebook-god-only-knows-what-its-doing-to-our-childrens-brains/>.

105. As a result of Carson's extensive and problematic use of Defendants' platforms, Carson committed suicide, and Plaintiff lost a child.

**FIRST CAUSE OF ACTION—ALL DEFENDANTS
STRICT LIABILITY—DESIGN DEFECT**

106. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

107. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

108. At all relevant times, Defendants designed, developed, managed, operated, inspected, tested (or not), marketed, controlled, advertised, promoted, and/or benefited from the products and platforms that Decedent used.

109. Defendants' products were designed and intended to be used as social media platforms.

110. Defendants' products as designed were unreasonably dangerous, posed a substantial likelihood of harm, and were therefore defective because of reasons enumerated in the Complaint—including, but not limited to, risks of social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, Attention Deficit Hyperactivity Disorder ("ADHD"), difficulty sleeping, fatigue, headaches,

migraines, loss of vision, and eye strain, among other harmful effects.

111. Defendants defectively designed the platforms to specifically appeal to and addict minors and young adults, who were particularly unable to appreciate the risks posed by the platforms, and who were particularly susceptible to harms from those products.

112. Defendants effectively designed the platforms to be addictive and take advantage of the chemical reward system of users' brains (especially young users) to create addiction and additional mental and physical health harms.

113. Defendants defectively designed their platforms, which are inherently dangerous because they included features making the product addictive and likely to cause the mental and physical health harms listed above. These features include, but are not limited to: (1) engagement-based ranking (sorting content on a user's feed based on engagement or "meaningful social interactions" rather than chronology); (2) intermittent variable rewards (a system of "likes", comments, strategically-timed notifications, promoting the content of new users and users who have not posted in a while, among other features); (3) face tracking and augmentation (*i.e.*, photo and video filters designed to make users appear more attractive); (4) endless scrollable content (especially auto-playing video content such as the Instagram "Reels" content feed); (5) limits to content length, (6) notifications, (7) interface design decisions (such as button placement), (8) autoplay, (9) hand-reflex conditioning UX design, (10) content stockpiling (such as "saving" videos in TikTok, Snapchat Memories, etc.), (11) the interaction of these features³³; and (12) other features of the platform which are currently unknown and hidden from users and governments.

114. Defendants defectively designed the platforms and Defendants failed to test as to

³³ The features have a distinct and harsher impact when they interact – for example, becoming addicting to Instagram through variable rewards lengthens use time and increases the impact of harmful beauty standards from "pretty" filters.

the safety of features they developed and implemented for use in the platforms. Once Defendants did perform some product testing and had knowledge of ongoing harm to Decedent, they failed to adequately remedy the product defects or warn Decedent.

115. Defendants' products do not perform as safely as a reasonable and ordinary consumer would reasonably assume and reasonably expect. Defendants' products pose a risk of serious mental and physical health injuries, as listed above.

116. The risks inherent in the design of Defendants' products significantly outweigh any benefits of such design.

117. Defendants could have utilized cost effective, reasonably feasible alternative designs to minimize these harms, such as by designing products without the harm causing features listed above, that were less addictive, less likely to cause mental health harms, while still providing an optimal social media experience and facilitating social connection.

118. Defendants could have limited the duration of login sessions to prevent harmful, extended use of the platforms and could have designed the platforms to log users out for a period of time if excessive use occurred. It is well established in research that to effectively stay connected socially, a person only needs a limited amount of use time. Instead, Defendants designed a product that uses behavioral engineering to maximize the number of use sessions and length of use per session, resulting in serious harm to users, including Plaintiff and Decedent.

119. Defendants could have used technology to enable user-level access restrictions so that use was tied to a user's age verification, or they could have employed other youth protecting features, thereby restricting underage children from using the platforms.

120. Defendants could have utilized cost effective, reasonably feasible alternative designs to minimize these harms, including, but not limited to:

- a. Designing platforms that did not include the features listed above while still fulfilling the social interest, and business networking purposes of a social media platform;
- b. Default protective limits to length of use, frequency of use, or content types;
- c. Opt-in restrictions to length of use, frequency of use, or content types;
- d. Session time limits;
- e. Blocks to use during certain times of day (such as morning, during work or school periods, or during evenings);
- f. Session time notifications, warnings, or reports;
- g. Warning of health effects of use and extended use upon sign-up;
- h. Parental controls;
- i. Notification to parents regarding their child's extensive use, use during sleep hours, or exposure to harmful content on the platform,
- j. Self-limiting tools;
- k. Implementing labels on images and videos that have been edited through the platform;
- l. Age-based content filtering;
- m. General content filtering;
- n. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content (*e.g.*, content that causes negative social comparison and misleading lack of realism) such as in the genres of lifestyle, influencer, beauty, fitness, success flaunting, and/or heavily edited images and videos;
- o. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed

- of potentially harmful content, such as inappropriate or salacious content;
- p. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content such as controversial, political, or emotionally weighted content;
 - q. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content such as content encouraging or promoting eating disorders, depressive thinking, self-harm, or suicide;
 - r. Informational labelling about the misleading and unrealistic nature of the content on a user's feed and the resulting feed composite because of content editing and algorithmic recommendation, presentation, and sorting;
 - s. Chronological presentation of content rather than algorithmic; and
 - t. Many other less harmful alternatives.

121. Instead, Defendants designed platforms that aggressively addict users with algorithms and features that increase addictiveness, use time, frequency of use, attention stealing, engagement with the platform, mental health harms, and profit to Defendants, all to the detriment of users' wellbeing—and particularly minor users.

122. It is reasonable for parents to expect that social media products that actively promote their platforms to minors will undertake reasonable efforts to notify parents when their child's use becomes excessive, occurs during sleep time, or exposes the child to harmful content. Defendants could feasibly design the products to identify minor users who are using the product excessively, using it during sleeping hours, or being exposed to harmful content, and notify their parents, at negligible cost.

123. Engagement-based ranking and intermittent variable rewards are highly addictive,

promote harmful social comparison, encourage bullying and conflict, can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, and present a false reality. Image and video filters inflict unrealistic and biased beauty standards upon users and cause harmful social comparison based on a misleading curation of peers' appearances, especially among teenage users.

124. The collaboration of these features multiplies the platforms' power to inflict harm by heightening the platform's addictive nature, increasing exposure to content that triggers negative social comparison, exposing users to innately harmful content, increasing time of exposure to harm, further encouraging bullying and promoting conflict, and multiplying harm in other ways.

125. The features combine to create a user interface of endless, auto-playing, image and video content, that is algorithmically sorted to place the most attention-grabbing content at the top and/or in a distilled feed that is very difficult to cease consuming, especially for young users. Content that is promoted by the algorithm is often related to beauty, success/wealth flaunting, or lifestyles, which causes negative physical or social comparison, especially among teens. Defendants' algorithms also promote controversial, disturbing, negative, and/or emotionally charged content, causing harm to users.

126. The combined result of these features is to present to users a false reality. It presents to users a world that is constantly controversial and negative, where most other people are exceedingly more attractive than the user; where most other people are exceedingly more successful and/or competent than the user; and which will facilitate and encourage harmful behaviors such as self-harm and eating disorders.

127. These features take advantage of biological systems, human behavior, and

psychology, to addict and condition users to engage in repetitive content-consuming actions such as scrolling, “liking,” and sharing content in search of repeated dopamine releases. All the while, the users’ input and behavior are tracked to allow the platform to automatically tune itself to each individual user to become highly addictive and as difficult to stop engaging with as possible.

128. Defendants failed to design the product with adequate warnings about the likely and foreseeable harms of use.

129. Defendants specifically intended for minors to use their products and were aware that minors were doing so.

130. Decedent used Defendants’ products as intended or in reasonably foreseeable ways.

131. Decedent’s suicide and Plaintiff’s resulting injuries—physical, emotional, and economic—were reasonably foreseeable to Defendants at the time of the products’ design, marketing, and operation.

132. Defendants’ products were defective and unreasonably dangerous when they left Defendants’ sole possession/control and were offered to users. The defects continued to exist through use by consumers, including Decedent, who used the products without any substantial change in the products’ condition.

133. The defective design of Defendants’ products directly and proximately caused harm to Carson and to Plaintiff. The addictive nature of Defendants’ social media platforms, as described above, caused Carson to use the platforms extensively. His use directly and foreseeably caused him to suffer numerous harms during his life, including depression, anxiety, interrupted sleep, and suicidal ideation.. And ultimately, Carson’s use of these platforms caused his death by suicide. The defective design of Defendants’ products also directly and proximately caused harm to Plaintiff. Among other harms, she incurred mental pain and suffering, the loss of her son’s

consortium, and economic harm that includes, but is not limited to, lost earnings and loss of earning capacity.

Plaintiff demands judgment against Defendants for compensatory and punitive damages, together with interest, costs of suit, attorneys' fees, and all such other relief as the Court deems proper.

**SECOND CAUSE OF ACTION—ALL DEFENDANTS
STRICT LIABILITY—FAILURE TO WARN**

134. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

135. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

136. At all relevant times, Defendants designed, developed, managed, operated, inspected, tested (or not), marketed, controlled, advertised, promoted, and or benefited from the products and platforms that Plaintiff used.

137. Defendants' products were and are in a defective condition that is unreasonably dangerous and unsafe to the consumer by failing to adequately warn users about the risk that the platforms pose of social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects, as described herein.

138. Defendants were aware that their products posed, among other things, the above-stated risks considering scientific and medical knowledge that was generally accepted at the time

of design, development, coding, dissemination, public release, and operation of platforms.

139. For example, Defendants failed to warn consumers, including Decedent, in the platforms' notices and through the marketing, promotion and advertising of the platforms that, according to Meta's own research:

- a. At least five-to-six percent of fourteen-year-olds admit to addiction to the platform;
- b. Sixty-six percent of teen girls and forty-six percent of teen boys have experienced negative social comparisons on Instagram;
- c. Facebook makes body-image issues worse for one-third of girls;
- d. Thirteen-and-one-half percent of teen-girl Instagram users say the platform makes thoughts of suicide and self-injury worse;
- e. Seventeen percent of teen-girl Instagram users say the platform makes eating issues worse; and
- f. Instagram users are twice as likely to develop an eating disorder as those who do not use social media.

140. Meta, in particular, is also defective for failing to warn users that:

- a. Engagement-based ranking and intermittent variable rewards are
 - i. highly addictive,
 - ii. promote harmful social comparison,
 - iii. promote negative, controversial, and/or emotionally activating content,
 - iv. promote negative, harmful, and/or dangerous interest groups and/or content creators,
 - v. encourage bullying and conflict,
 - vi. can trap users in a cycle of viewing content that is innately harmful or in a

- manner that is harmful, such as content related to eating disorders, depression, or self-harm,
- vii. present a false reality (regarding one's comparative status to their peers, and/or the general state of world or political affairs);
- b. Face tracking and augmentation (image and video filters):
 - i. inflict unrealistic and biased beauty standards upon users,
 - ii. cause harmful social comparison based on a misleading curation of peers' appearances and success, especially among teenage female users;
- c. The platforms cause the mental and physical health harms as listed above;
- d. The likelihood of these harms and likely severity for these harms are even greater for the developing brains of minors;
- e. The likelihood and intensity of these harmful effects are exacerbated by the interaction of these features; and
- f. The likelihood and intensity of these harmful effects are increased by other features and innerworkings of the platforms which are currently publicly unknown and hidden from users and governments.

141. Through their incredible power as the premier social media companies (and/or association with such companies), Defendants have silenced and suppressed information, research efforts, and public awareness efforts regarding the harmful health impact of their platforms.

142. Rather than warning users of likely harms, Defendants regularly fine-tune the platforms to aggressively psychologically engineer new and current users to increase addiction and exposure to the platforms, causing and increasing other mental and physical harms. The platforms encourage users to recruit more users across their personal contacts.

143. The failure of Defendants to adequately warn about their defective products and choice to instead misleadingly advertise through conventional, online, and peer-to-peer avenues created a danger of injuries described herein that were reasonably foreseeable at the time of design, distribution, dissemination, and operation of the platforms.

144. Ordinary consumers would not have recognized the potential risks of Defendants' products when used in a manner reasonably foreseeable to Defendants.

145. Defendants are strictly liable for creating, operating, and unleashing defective platforms that contained inadequate warnings.

146. Plaintiff could not have averted injury through the exercise of reasonable care for reasons including Defendants' concealment of the true risks posed by Defendants' products.

147. The defects in Defendants' products, including the lack of adequate warnings and instructions, existed at the time the products left Defendants' sole possession and continued to exist through the products' dissemination to and use by consumers, including Decedent. Defendants' products were used without substantial change in their condition, by anyone other than Defendants and its employees, from the time of their development.

148. At all relevant times, Defendants could have provided adequate warnings and instructions to prevent the harms and injuries set forth herein, such as providing full and accurate information about the products in advertising, at point of sign-up, and at various intervals of the user interface.

149. Carson suffered injuries and death as a direct and proximate result of Defendants' failure to warn and instruct. Had users been warned effectively of the dangers presented by Defendants' products, Plaintiff would not have permitted Carson to sign up or use Defendants' products, and Carson would not have used or signed up on Defendants' products. Plaintiff would

not have permitted Carson to sign up or use Defendants' products, and Carson would not have used or signed up on Defendants' products, had Carson received adequate warnings and instructions that he could be harmed by platform design that hijacks a user's neural reward system, develop an addiction, be exposed to an algorithmic content feed causing negative social and appearance comparison and a negative false presentation of reality, and suffer injuries including social media compulsion, self-harm, multiple periods of suicidal ideation, depression, severe anxiety, an eating disorder(s), body dysmorphia, and a reduced inclination or ability to sleep, among other harmful effects, which may cause or contribute to additional harms, including but not limited to committing suicide.

150. The platforms' lack of adequate and sufficient warnings and instructions, and its inadequate and misleading advertising, was the proximate cause and/or a substantial contributing factor in causing the Decedent's death and the resulting harms to Plaintiff, as described above.

151. Plaintiff demands judgment against Defendants for compensatory and punitive damages, together with interest, costs of suit, fees, and all such other relief as the Court deems proper.

**THIRD CAUSE OF ACTION—ALL DEFENDANTS
PRODUCTS LIABILITY—NEGLIGENT DESIGN**

152. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

153. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

154. At all relevant times, Defendants designed, developed, managed, operated,

inspected, tested (or not), marketed, controlled, advertised, promoted, and or benefited from the products and platforms that Decedent used.

155. Defendants' products were designed and intended to be used as social media platforms.

156. Defendants knew or, by the exercise of reasonable care, should have known use of Defendants' products was dangerous, harmful, and injurious when used by Decedent in a reasonably foreseeable manner, particularly so with minors and young adults.

157. Defendants knew or, by the exercise of reasonable care, should have known ordinary consumers such as Decedent would not have realized the potential risks and dangers of Defendants' products. Defendants' products are highly addictive and likely to cause mental and physical injuries as listed above.

158. Defendants owed a duty to all reasonably foreseeable users to design a safe product.

159. Defendants breached their duty by failing to use reasonable care in the design of their platforms because the products were addictive; had mental, cognitive, and physical health impacts; and had a likelihood of causing social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects.

160. Defendants breached their duty by failing to use reasonable care in the design of their products by negligently designing the platforms with physically and mentally harmful features including, but not limited to: (1) engagement-based ranking (sorting content on a user's feed based on engagement or "meaningful social interactions" rather than chronology); (2)

intermittent variable rewards (a system of “likes”, comments, strategically-timed notifications, promoting the content of new users and users who have not posted in a while, among other features); (3) face tracking and augmentation (*i.e.*, photo and video filters designed to make users appear more attractive); (4) endless scrollable content (especially auto-playing video content such as the Instagram “Reels” content feed); (5) the interaction of these features; and (6) other features of the platform which are currently unknown and hidden from users and governments.

161. Engagement-based ranking and intermittent variable rewards are highly addictive, promote harmful social comparison, encourage bullying and conflict, can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, and present a false reality. Image and video filters inflict unrealistic and biased beauty standards upon users and cause harmful social comparison based on a misleading curation of peers’ appearances, especially among teenage users.

162. The collaboration of these features multiplies the platforms’ power to inflict harm by heightening the platform’s addictive nature, increasing exposure to content that triggers negative social comparison, exposing users to innately harmful content, increasing time of exposure to harm, further encouraging bullying and promoting conflict, and multiplying harm in other ways.

163. The features combine to create a user interface of endless, auto-playing image and video content, that is algorithmically sorted to place the most attention-grabbing content at the top and/or in a distilled feed that is very difficult to cease consuming, especially for young users. Content that is promoted by the algorithm is often related to beauty, success/wealth flaunting, or lifestyles, which causes negative physical or social comparison, especially among teens. Defendants’ algorithms also promote controversial, disturbing, negative, and/or emotionally

charged content causing harm to users.

164. The combined result of these features is to present to users a false reality—it presents to users a world which is constantly controversial and negative; where most other people are exceedingly more attractive than the user; where most other people are exceedingly more successful and/or competent than the user; and which will facilitate and encourage harmful behaviors such as self-harm and eating disorders.

165. These features take advantage of biological systems, human behavior, and psychology, to addict and condition users to engage in repetitive, content-consuming actions such as scrolling, “liking,” and sharing content in search of repeated dopamine releases. All the while, the users’ input and behavior are tracked to allow the platform to automatically tune itself to each individual user to become as addictive and difficult to stop engaging with as possible.

166. Potential health harms from these features include, among other types of harm, social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects.

167. Defendants breached their duty by failing to use reasonable care in the design of their products by negligently designing the platforms to uniquely appeal to minors, who were particularly unable to appreciate the risks posed by the platforms.

168. Defendants breached their duty by failing to use reasonable care by failing to use cost effective, reasonably feasible alternative designs that would make the product less addictive and harmful to minors.

169. Defendants breached their duty by failing to use reasonable care by failing to use

cost effective, reasonably feasible alternative designs to minimize these harms, including but not limited to:

- a. Designing platforms that did not include the features listed above while still fulfilling the social, interest, and business networking purposes of a social media platform;
- b. Default protective limits to length of use, frequency of use, or content types;
- c. Opt-in restrictions to length of use, frequency of use, or content types;
- d. session time limits;
- e. Blocks to use during certain times of day (such as morning, during work or school periods, or during evenings);
- f. Session time notifications, warnings, or reports;
- g. Warning of health effects of use and extended use upon sign-up;
- h. Parental controls;
- i. Self-limiting tools;
- j. Implementing labels on images and videos that have been edited through the platform;
- k. Age-based content filtering;
- l. General content filtering;
- m. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content (by causing negative social comparison and misleading lack of realism) such as in the genres of lifestyle, influencer, beauty, fitness, success flaunting, and/or heavily edited images and videos;
- n. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed

- of potentially harmful content such as inappropriate or salacious content;
- o. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content such as controversial, political, or emotionally weighted content;
- p. Algorithmic (whether default or opt-in) reductions or elimination in a user's feed of potentially harmful content such as content encouraging or promoting eating disorders, depressive thinking, self-harm, or suicide;
- q. Informational labelling about the misleading and unrealistic nature of the content on a user's feed and the resulting feed composite because of content editing and algorithmic presentation/sorting;
- r. Chronological presentation of content rather than algorithmic;
- s. Many other less harmful alternatives.

170. Defendants breached their duty by failing to use reasonable care by failing to use cost effective, reasonably feasible alternative designs that could have reduced mental and physical harms to users, especially youth. Instead, Defendants designed platforms that aggressively addict users with algorithms and features that increase addictiveness, use time, frequency of use, attention stealing, engagement with the platform, mental health harms, and profit to Defendants, all to the detriment of users' wellbeing.

171. Defendants breached their duty by failing to use reasonable care by failing to use cost-effective, reasonably feasible alternative designs utilizing technology to enable user-level access restrictions so that use was tied to a user's age verification, restricting those underaged from using the platforms, or other youth-protecting features.

172. A reasonable company under the same or similar circumstances would have

designed a safer product.

173. Plaintiff was harmed directly and proximately by the platforms Defendants' failure to use reasonable care in the design of their products. Carson used these social media platforms increasingly until his death in September, 2021. His use of these platforms caused continuing and escalating harms such as self-harm, periods of suicidal ideation, depression, a reduced inclination or ability to sleep, and ultimately suicide, among other harmful effects, which may cause or contribute to additional disease.

174. The design of Defendants' products was a proximate cause of Plaintiff's harms.

175. Plaintiff demands judgment against Defendants for proper compensatory, , and punitive damages, costs of suit, attorneys' fees, and all such other relief as the Court deems just and proper.

**FOURTH CAUSE OF ACTION—ALL DEFENDANTS
PRODUCTS LIABILITY—NEGLIGENT FAILURE TO WARN**

176. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

177. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

178. At all relevant times, the Defendants designed, developed, managed, operated, inspected, tested (or not), marketed, controlled, advertised, promoted, and/or benefited from the products and platforms that Decedent used.

179. Defendants knew or, by the exercise of reasonable care, should have known use of their products was dangerous, harmful, and injurious when used by Decedent in a reasonably foreseeable manner, particularly with minors and young adults.

180. Defendants knew or, by the exercise of reasonable care, should have known ordinary consumers such as Decedent would not have realized the potential risks and dangers of Defendants' products. Defendants' platforms are highly addictive and likely to cause mental and physical injuries as listed above.

181. Defendants knew or, by the exercise of reasonable care, should have known that their products posed risks, including the risks of social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects, as described herein, that were known and knowable in light of scientific and medical knowledge that was generally accepted in the scientific community at the time of development, dissemination, public release, and operation of the platforms.

182. Defendants owed a duty to all reasonably foreseeable users to disclose the risks associated with the use of Defendants' products.

183. Defendants breached their duty of care by failing to use reasonable care in providing adequate warnings in the platforms' sign-up warnings, and through marketing, promoting and advertising of the platforms. For example, according to Meta's own research:

- a. At least five-to-six percent of fourteen-year-olds admit to addiction to Meta's platforms;
- b. Sixty-six percent of teen girls and forty-six percent of teen boys have experienced negative social comparisons on Instagram;
- c. Facebook makes body-image issues worse for one-third of girls;
- d. Thirteen-and-one-half percent of teen-girl Instagram users say the platform makes

thoughts of suicide and self-injury worse;

- e. Seventeen percent of teen-girl Instagram users say the platform makes eating issues worse;
- f. Instagram users are twice as likely to develop an eating disorder as those who don't use social media.

184. Defendants' products are also defective for failing to warn users that, among other things:

- a. Engagement-based ranking and intermittent variable rewards are:
 - i. highly addictive,
 - ii. promote harmful social comparison,
 - iii. promote negative, controversial, and/or emotionally activating content,
 - iv. promote negative, harmful, and/or dangerous interest groups and/or content creators,
 - v. encourage bullying and conflict,
 - vi. can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, such as content related to eating disorders, depression, or self-harm, and
 - vii. present a false reality (regarding one's comparative status to their peers, and/or the general state of world or political affairs).
- b. Face tracking and augmentation (image and video filters):
 - i. inflict unrealistic and biased beauty standards upon users, and
 - ii. cause harmful social comparison based on a misleading curation of peers' appearances and success, especially among teenage female users.

- c. The platforms cause the mental and physical health harms as listed above.
- d. The likelihood of these harms and likely severity for these harms are even greater for the developing brains of minors.
- e. The likelihood and intensity of these harmful effects are exacerbated by the collaboration of these features. And,
- f. The likelihood and intensity of these harmful effects are increased by other features and innerworkings of the platforms that are currently publicly unknown and hidden from users and governments.

185. The failure of Defendants to warn adequately about its defective products, and its efforts to misleadingly advertise through conventional and social media avenues, created a danger of injuries described herein that were reasonably foreseeable at the time of design, development, coding, operation, and dissemination of the platforms.

186. Through their incredible power as the premier social media companies (and/or association with such companies), Defendants have silenced and suppressed information, research efforts, and public awareness efforts regarding the harmful health impact of their platforms.

187. Rather than warning users of likely harms, Defendants regularly fine-tune the platforms to aggressively socially and psychologically engineer new and ongoing users to increase addiction and exposure to their platforms, causing and increasing physical and psychological harm. The platforms encourage users to recruit more users across their personal electronic contacts.

188. The failure of Defendants to warn adequately about their defective products—and their efforts to misleadingly advertise through conventional, online, and peer-to-peer avenues—created a danger of injuries described herein that were reasonably foreseeable at the time of the design, distribution, and operation of the platforms.

189. At all relevant times, Defendants could have provided adequate warnings and instructions to prevent the harms and injuries set forth herein, such as providing full and accurate information about the products in advertising, at point of dissemination/account registration, and at various intervals of the user interface.

190. A reasonable company under the same or similar circumstances would have warned and instructed users of the dangers presented by the social media platforms, particularly for minors.

191. Decedent died as a direct and proximate result of Defendants' failure to warn and instruct because had users been warned effectively of the dangers presented by Defendants' products, Plaintiff would not have permitted Decedent to sign up or use Defendants' products, and Decedent would not have used or signed up on Defendants' products. Plaintiff would not have permitted Decedent to sign up or use Defendants' products, and Decedent would not have used or signed up on Defendants' products, had Decedent received adequate warnings and instructions that he could be harmed by platform design that hijacks a user's neural reward system, develop an addiction, be exposed to an algorithmic content feed causing negative social and appearance comparison and a negative false presentation of reality, and suffer injuries including social media compulsion, self-harm, multiple periods of suicidal ideation, depression, severe anxiety, an eating disorder(s), body dysmorphia, and a reduced inclination or ability to sleep, among other harmful effects, which may cause or contribute to additional disease.

192. Defendants' lack of adequate and sufficient warnings and instructions, and their inadequate and misleading advertising, were a substantial contributing factor in Carson suffering various harms, as described above, including but not limited to his ultimate suicide. Similarly, lack of adequate and sufficient warnings and instructions, and their inadequate and misleading advertising, were a substantial contributing factor in causing the harms to Plaintiff that resulted

from Carson's suffering and suicide.

193. Plaintiff demands judgment against Defendants for compensatory and punitive damages, together with interest, costs of suit, attorneys' fees, and all such other relief as the Court deems proper.

**FIFTH CAUSE OF ACTION—ALL DEFENDANTS
NEGLIGENCE AND/OR GROSS NEGLIGENCE**

194. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

195. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

196. At all relevant times, Defendants designed, developed, managed, operated, inspected, tested (or not), marketed, advertised, promoted, disseminated, made publicly available, and/or benefited from their platforms, and therefore owed a duty of reasonable care to avoid causing harm to those that used it, such as Decedent.

197. Defendants' platforms were the types of products that could endanger others if negligently made or promoted.

198. Defendants had a duty of reasonable care in designing, manufacturing, coding, inspecting, testing, marketing, advertising, promoting, supplying, disseminating and/or making publicly available the platforms to avoid causing harm to those that used Defendants' products.

199. Defendants knew or should have known by the exercise of reasonable care, the risks to users of the platforms, of mental and physical health harms.

200. Defendants knew or should have known by the exercise of reasonable care, that

minors and young people would be attracted to these products.

201. Defendants knew or, by the exercise of reasonable care, should have known use of Defendants' products was dangerous, harmful, and injurious when used in a reasonably foreseeable manner, particularly with minors such as Carson and young adults.

202. Defendants knew or, by the exercise of reasonable care, should have known ordinary consumers such as Plaintiff and her son, Carson, would not have realized the potential risks and dangers of Defendants' products. Defendants' platforms are highly addictive and likely to cause mental and physical injuries as listed above.

203. Defendants knew or, by the exercise of reasonable care, should have known that Defendants' products posed risks, including the risks of social media compulsion, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects, as described herein, that were known and knowable in light of scientific and medical knowledge that was generally accepted in the scientific community at the time of development, dissemination, public release, and operation of the platforms.

204. Defendants knew or should have known that Defendants' products needed to be researched, designed, manufactured, coded, programmed, assembled, inspected, tested, marketed, advertised, promoted, operated, managed, maintained, supplied, disseminated, and/or made available properly, without defects and with due care to avoid needlessly causing harm.

205. Defendants knew or should have known that Defendants' products would cause harm to users if the following features, among others, were included: (1) engagement-based ranking (sorting content on a user's feed based on engagement or "meaningful social interactions")

rather than chronology); (2) intermittent variable rewards (a system of “likes,” comments, strategically-timed notifications, and promoting the content of new users and users who have not posted in a while, among other features); (3) face tracking and augmentation (*i.e.*, photo and video filters designed to make users appear more attractive); (4) endless scrollable content (especially auto-playing video content such as the Instagram “Reels” content feed); (5) the interaction of these features; and (6) other features of the platform which are currently unknown and hidden from users and governments.

206. Defendants knew or should have known that engagement-based ranking and intermittent variable rewards are highly addictive, promote harmful social comparison, encourage bullying and conflict, can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, and present a false reality. Image and video filters inflict unrealistic and biased beauty standards upon users and cause harmful social comparison based on a misleading curation of peers’ appearances, especially among teenage female users.

207. Defendants knew or should have known that the collaboration of these features multiplies the platforms’ power to inflict harm by heightening the platform’s addictive nature, increasing exposure to content that triggers negative social comparison, exposing users to innately harmful content, increasing time of exposure to harm, further encouraging bullying and promoting conflict, and multiplying harm in other ways.

208. Defendants knew or should have known that the features combine to create a user interface of endless, auto-playing, image and video content, which is algorithmically sorted to place the most attention-grabbing content at the top and/or in a distilled feed that is very difficult to cease consuming, especially for young users. Content that is promoted by the algorithm is often related to beauty, success/wealth flaunting, or lifestyles, which causes negative physical or social

comparison, especially among teens. Defendants' algorithms also promote controversial, disturbing, negative, and/or emotionally charged content causing harm to users.

209. Defendants knew or should have known that the combined result of these features is to present to users a false reality. It presents to users a world that is constantly controversial and negative, where most other people are more attractive than the user, where most other people are more successful and/or competent than the user. This false world view facilitates and encourages harmful behaviors such as self-harm and eating disorders.

210. Defendants knew or should have known that these features take advantage of biological systems, human behavior, and psychology, to addict and condition users to engage in repetitive content-consuming actions such as scrolling, "liking," and sharing content in search of repeated dopamine releases. All the while, the users' input and behavior are tracked to allow the platform to automatically tune itself to each individual user to become as addictive and difficult to stop engaging with as possible.

211. Defendants knew or should have known that Defendants' products could cause serious risk of harm, particularly to young persons and minors.

212. Defendants were negligent, reckless, and careless, and failed to discharge the duty of acting with reasonable care that they owed to Carson and to Plaintiff, thereby causing Carson and Plaintiff to suffer harm.

213. The negligence and extreme carelessness of Defendants includes, but is not limited to, the following:

- a. Failure to perform adequate testing of their platforms prior to marketing to ensure safety, including long-term testing of the product, and testing for physical and mental health injuries;

- b. Failure to warn consumers that Defendants' products had not been adequately tested or researched prior to marketing to ensure safety;
- c. Failure to take reasonable care in the design of Defendants' products;
- d. Failure to use reasonable care in the production/development of Defendants' platforms;
- e. Failure to use reasonable care in the operation of Defendants' products;
- f. Failure to use reasonable care in the coding/assembly of Defendants' products;
- g. Failure to use reasonable care in advertising, promoting, and marketing Defendants' products;
- h. Failure to use reasonable care in the dissemination of Defendants' products without adequate warnings;
- i. Use of a design that includes features that cause mental and physical harm, including, but not limited to: (1) engagement-based ranking (sorting content on a user's feed based on engagement or "meaningful social interactions" rather than chronology); (2) intermittent variable rewards (a system of "likes," comments, strategically-timed notifications, promoting the content of new users and users who have not posted in a while, among other features); (3) face tracking and augmentation (*i.e.*, photo and video filters designed to make users appear more attractive); (4) endless scrollable content (especially auto-playing video content such as the Instagram "Reels" content feed); (5) the interaction of these features; and (6) other features of the platform that are currently unknown and hidden from users and governments;
- j. Use of a design, engagement-based ranking, and intermittent variable rewards that Defendants knew or should have known that are highly addictive, promote harmful

social comparison, encourage bullying and conflict, can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, and present a false reality. Image and video filters inflict unrealistic and biased beauty standards upon users and cause harmful social comparison based on a misleading curation of peers' appearances, especially among teenage female users;

- k. Use of design features that Defendants knew or should have known would interact to multiply the platforms' power to inflict harm by heightening the platforms' addictive nature, increasing exposure to content that triggers negative social comparison, exposing users to innately harmful content, increasing time of exposure to harm, further encouraging bullying and promoting conflict, and multiplying harm in other ways;
- l. Use of design features that Defendants knew or should have known would combine to create a user interface of endless, auto-playing, image and video content, which is algorithmically sorted to place the most attention-grabbing content at the top and/or in a distilled feed that is very difficult to cease consuming, especially for young users. Content that is promoted by the algorithm is often related to beauty, success/wealth flaunting, or lifestyles, which causes negative physical or social comparison, especially among teens. Defendants' algorithms also promote controversial, disturbing, negative, and/or emotionally charged content causing harm to users;
- m. Use of design features that Defendants knew or should have known would result in presenting to users a false reality. It presents to users a world which is constantly controversial and negative, most other people are more attractive than the user, and

most other people are more successful and/or competent than the user;

- n. Failure to inspect Defendants' products for proper operation and to avoid addiction, overuse, or mental health harms;
- o. Failure to reasonably and properly test and properly analyze the testing of Defendants' platforms under reasonably foreseeable circumstances;
- p. Failure to warn consumers about the dangers associated with use of Defendants' products, in that it was unsafe, causes social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, and eye strain, among other harmful effects;
- q. Failure to subsequently remedy harm-causing features of the platforms after Defendants had actual knowledge of harm to users;
- r. Failure to provide any instructions regarding a safe manner, frequency, and length of use of the platforms per day;
- s. Failure of Defendants to verify the age of consumers creating accounts and using Defendants' platforms;
- t. Failure to recall Defendants' platforms;
- u. All other failures, acts and omissions set forth herein.

214. Defendants' acts and omissions constitute gross negligence because they constitute a total lack of care and an extreme departure from what a reasonably careful company would do in the same situation to prevent foreseeable harm to Plaintiff.

215. Defendants acted and/or failed to act willfully, and with conscious and reckless

disregard for the rights and interests of Carson and Plaintiff, and their acts and omissions had a great probability of causing significant harm and in fact resulted in such harm to Carson, who committed suicide, and to Plaintiff, who lost her son.

216. Based on their strategic and intentional promotion, advertising, and marketing history, Defendants reasonably should have foreseen that young people would try Defendants' products and quickly become addicted to the platforms, resulting in teenagers and young adults developing lifelong addictions. After fine-tuning the product to addict users using features that also result in serious mental health and physical harms, Defendants reasonably should have foreseen the emotional distress this would cause on the individuals who would get addicted, as well the stress this would place on their loved ones around them.

217. Defendants intentionally created an attractive nuisance to children, but simultaneously failed to provide adequate warnings or safeguards from the harmful effects they knew were occurring.

218. Carson was injured as a direct and proximate result of negligence and/or gross negligence as described herein. Such harm includes social media compulsion, self-harm, periods of suicidal ideation, depression, severe anxiety, a reduced inclination or ability to sleep, and ultimately suicide.

219. Jennifer Krull lost her son because of the harms caused by social media. She suffered mental anguish, financial harm, loss of consortium, and pecuniary loss.

220. Defendants' negligence and/or gross negligence were a substantial factor in causing and or contributing to Carson's injuries, to his death by suicide, and to the resulting harms to Plaintiff. Plaintiff's damages include mental anguish, lost sleep, anxiety, depression, suicidal ideation, self-harm, and suicide.

221. Plaintiff demands judgment against Defendants for compensatory and punitive damages, together with interest, costs of suit, attorneys' fees, and all such other relief as the Court deems proper.

**SIXTH CAUSE OF ACTION—ALL DEFENDANTS
NEGLIGENT MISREPRESENTATION**

222. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

223. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident State, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

224. At all relevant times, Defendants designed, developed, managed, operated, inspected, tested (or not), marketed, advertised, promoted, disseminated, made publicly available, and/or benefited from their platforms, and therefore owed a duty of reasonable care to avoid causing harm to those that used it, such as Decedent.

225. Defendants were negligent, reckless, and careless and owed a duty to Decedent to make accurate and truthful representations regarding their platforms.

226. Defendants breached their duty, thereby causing Plaintiff to suffer harm.

227. Defendants represented to Carson and to Plaintiff—via the media, advertising, website, social media, and promotions, among other misrepresentations described herein—that:

- a. Defendants' products were safe and were not harmful;
- b. Long-term, frequent, prolonged use was harmless;
- c. Defendants' products increased social connectivity, rather than causing feelings of isolation; and

- d. An inaccurate and misleading portrayal of the platforms mental and physical health impact;

228. Defendants omitted/failed to inform Carson, Plaintiff, and other consumers, by any media, of the harms of their platforms. For example, according to Meta's own research:

- a. At least five-to-six percent of fourteen-year-olds admit to addiction to Meta's platforms;
- b. Sixty-six percent of teen girls and forty-six percent of teen boys have experienced negative social comparisons on Instagram;
- c. Facebook makes body-image issues worse for one-third of girls;
- d. Thirteen-and-one-half percent of teen-girl Instagram users say the platform makes thoughts of suicide and self-injury worse;
- e. Seventeen percent of teen-girl Instagram users say the platform makes eating issues worse; and
- f. Instagram users are twice as likely to develop an eating disorder as those who don't use social media.

229. Among other things, Defendants also failed to inform users that, as it knew or should have known:

- a. Engagement-based ranking and intermittent variable rewards are
 - i. highly addictive,
 - ii. promote harmful social comparison,
 - iii. promote negative, controversial, and/or emotionally activating content,
 - iv. promote negative, harmful, and/or dangerous interest groups and/or content creators,
 - v. encourage bullying and conflict,

- vi. can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, such as content related to eating disorders, depression, or self-harm, and
- vii. present a false reality (regarding one's comparative status to their peers, and/or the general state of world or political affairs);
- b. Face tracking and augmentation (image and video filters):
 - i. inflict unrealistic and biased beauty standards upon users, and
 - ii. cause harmful social comparison based on a misleading curation of peers' appearances and success, especially among teenage female users;
- c. The platforms cause the mental and physical health harms as listed above;
- d. The likelihood of these harms and likely severity for these harms are even greater for the developing brains of minors;
- e. The likelihood and intensity of these harmful effects are exacerbated by the interaction of these features; and
- f. The likelihood and intensity of these harmful effects are increased by other features and innerworkings of the platforms which are currently publicly unknown and hidden from users and governments.

230. The representations described above were false, and the omissions were material. The platforms are unsafe and Defendants knew that they cause mental and physical health harms, especially in youth, such as social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harmful effects.

231. Defendants knew or should have known the representations cited above were false and negligently made them without regard for their truth.

232. Through Defendants' incredible power as the premier social media companies (and/or association with such companies), they have silenced and suppressed information, research efforts, and public awareness efforts regarding the harmful health impact of their platforms.

233. Defendants had a duty to accurately provide this information to Decedent. In concealing this information from Decedent, Defendants breached their duty. Defendants also gained financially from this concealment, and because of their breach.

234. Defendants intended for Carson and Plaintiff to rely on these representations.

235. Each of these misrepresentations were material at the time they were made. Each of the misrepresentations concerned material facts that were essential to the analysis undertaken by Carson as to whether to sign up for or use Defendants' products, and by Plaintiff as to whether to allow Carson to sign up for or use Defendants' products.

236. Defendants have yet to disclose or correct these misrepresentations about their products.

237. Carson reasonably relied on these representations and was harmed as described herein. Carson's and Plaintiff's reliance on Defendants' representations was a substantial factor in causing Plaintiff's harms. Had Defendants told Plaintiff or Carson the truth about the safety and algorithmic framework of the platforms, Carson would not have registered with Meta or Snapchat or used those platforms.

238. Defendants' acts and omissions as described herein were committed in reckless disregard of Decedents rights, interests, and well-being to enrich Defendants.

239. Plaintiff was injured as a direct and proximate result of Defendants' negligent

misrepresentations regarding their platforms as described herein. Such harm includes social media compulsion, self-harm, multiple periods of suicidal ideation, depression, severe anxiety, a reduced inclination or ability to sleep, among other harmful effects, which may cause or contribute to additional disease.

240. Plaintiff demands judgment against Defendants for compensatory, treble, and punitive damages, attorneys' fees, and all such other relief as the Court deems proper.

241. Through its misrepresentations and omissions, Defendants committed continual tortious, and fraudulent acts that continue to this day.

242. As a result of Defendants' fraudulent concealment, Plaintiff was unaware and could not have reasonably known or learned through reasonable diligence that her son was exposed to the defects and risks alleged herein and that those defects and risks were the direct and proximate result of Defendants' acts and omissions.

SEVENTH CAUSE OF ACTION- META ONLY
FRAUDULENT CONCEALMENT

244. Plaintiff incorporates by reference each preceding and succeeding paragraph as though set forth fully at length herein.

245. Plaintiff pleads all Causes of Action of this Complaint in the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the law of Plaintiff's resident state, Missouri. Plaintiff pleads this Cause of Action under all applicable product liability acts, statutes, and laws of the State of Missouri.

246. At all relevant times, Meta designed, developed, managed, operated, inspected, tested (or not), marketed, advertised, promoted, disseminated, made publicly available, and/or benefited from Facebook and Instagram and therefore owed a duty of reasonable care to avoid

causing harm to those that used it, such as Plaintiff.

247. Meta has a duty to disclose material facts about Facebook and Instagram to Plaintiff.

248. Meta fraudulently and deceptively marketed Facebook and Instagram to Plaintiff as safe, healthful, or not harmful, and beneficial to user mental health and social connectedness when Meta knew that the truth is just the opposite.

249. Meta fraudulently and deceptively downplayed or minimized any risk associated with its platforms and product features. Meta and others worked together to pitch news stories or other media content designed to downplay the risks of its platforms, suggesting that any concern was overblown, or a panic. These tactics mimic those used by the tobacco industry to sow seeds of doubt and confusion among the public, to initiate new users, to keep customers using Facebook and Instagram, and to avoid regulation or legislative efforts to control Meta.

250. Through their incredible power as the premier social media companies (and/or association with such companies), Meta has silenced and suppressed information, research efforts, and public awareness efforts regarding the harmful health impact of their platforms.

251. Meta fraudulently and deceptively concealed that Facebook and Instagram can cause social media addiction, depression, body dysmorphia, anxiety, suicidal ideation, self-harm, thoughts of self-harm, insomnia, eating disorder, anorexia nervosa, bulimia nervosa, death by suicide, death by eating disorder, lack of focus, ADHD, difficulty sleeping, fatigue, headaches, migraines, loss of vision, eye strain, among other harms.

252. Meta fraudulently and deceptively concealed they had not adequately researched or tested the platforms and its features to assess its safety before offering it on the market and promoting it to young people and adults.

253. Meta fraudulently and deceptively concealed that the platforms were powerfully addictive.

254. Meta further failed to disclose to Plaintiff that the platforms are designed to create and sustain an addiction. Meta also manipulated the platforms algorithms and features in ways that could and would impact their addictiveness and mental health impact, and Meta did so without notifying Plaintiff. Meta actively concealed the innerworkings of its platforms and their mental health impacts.

255. Meta concealed from Plaintiff that, according to its own research:

- a) At least five-to-six percent of fourteen-year-olds admit to addiction to Meta's platforms;
- b) Sixty- six percent of teen girls and forty-six percent of teen boys have experienced negative social comparisons on Instagram;
- c) Facebook makes body-image issues worse for one-third of girls;
- d) Thirteen-and-one-half percent of teen-girl Instagram users say the platform makes thoughts of suicide and self-injury worse;
- e) Seventeen percent of teen-girl Instagram users say the platform makes eating issues worse; and
- f) Instagram users are twice as likely to develop an eating disorder as those who don't use social media.

256. Meta also concealed from Plaintiff that:

- a) Engagement-based ranking and intermittent variable rewards are:
 - i. Highly addictive;
 - ii. promote harmful social comparison,

- iii. promote negative, controversial, and/or emotionally activating content
 - iv. promote negative, harmful, and/or dangerous interest groups and/or content creators,
 - v. encourage bullying and conflict,
 - vi. can trap users in a cycle of viewing content that is innately harmful or in a manner that is harmful, such as content related to eating disorders, depression, or self-harm, and
 - vii. present a false reality (regarding one's comparative status to their peers, and/or the general state of world or political affairs);
- b) Face tracking and augmentation (image and video filters):
- i. Inflict unrealistic and biased beauty standards upon users, and
 - ii. Cause harmful social comparison based on a misleading curation of peers' appearances and success, especially among teenage female users;
- c) The platforms cause the mental and physical health harms as listed above;
- d) The likelihood of these harms and likely severity for these harms are even greater for the developing brains of minors;
- e) The likelihood and intensity of these harmful effects are exacerbated by the collaboration of these features; and
- f) The likelihood and intensity of these harmful effects are increased by other features and innerworkings of the platforms which are currently publicly unknown and hidden from users and governments.

257. Each of these misrepresentations and omissions were material at the time they were made. Each of the misrepresentations and omissions concerned material facts that were essential to the analysis undertaken by Plaintiff as to whether to register or use the platforms.

258. Plaintiff did not know of the facts Meta concealed.

259. Meta intended to deceive Plaintiff and the public by concealing these facts.

260. Meta had a duty to accurately provide this information to Plaintiff. In concealing this information from Plaintiff, Meta breached their duty. Meta also gained financially from this concealment, and because of their breach.

261. Meta had ample opportunities to disclose these facts to Plaintiff, through advertising, on its websites, platforms, and on other social media. Meta concealed material information at all relevant times, through today. Meta has yet to disclose the truth about Facebook and Instagram.

262. Carson relied to his detriment on Meta's fraudulent omissions. Had Plaintiff been adequately informed of the material facts concealed from him regarding the safety of the platforms, and not intentionally deceived by Meta, he would not have signed up for or used Facebook and Instagram.

263. Meta's fraudulent concealment was a substantial factor in Plaintiff's harms as described herein, including: social media compulsion, self-harm, suicidal ideation, depression, severe anxiety, a reduced inclination or ability to sleep, and suicide.

264. Plaintiff was injured as a direct and proximate result of Meta's fraudulent conduct as described herein.

265. Plaintiff demands judgment against Meta for compensatory punitive damages, together with interest, costs of suit, attorneys' fees, and all such other relief as the Court deems

proper.

VI. DEMAND FOR A JURY TRIAL

Plaintiff hereby demands a trial by jury.

VII. PRAYER FOR RELIEF

Plaintiff prays for judgment against Defendants to the full extent of the law, including but not limited to:

1. Entering judgment for Plaintiff and against Defendants;
2. Entering an Order that Defendants are jointly and severally liable;
3. Damages to compensate Plaintiff for Carson's injuries and death, sustained as a result of Carson's use of the platforms, including, but not limited to, Carson's pain and suffering, mental anguish, and death; the mental pain and suffering of the Plaintiff, the loss of her son's consortium; and economic harm that includes, but is not limited to, lost earnings, loss of earning capacity, and funeral expenses;
4. Awarding actual and compensatory damages;
5. Awarding statutory damages in the maximum amount permitted by law;
6. Awarding exemplary and/or punitive damages in an amount in excess of the jurisdictional limits;
7. Awarding reasonable attorneys' fees;
8. Awarding experts' fees;
9. Awarding costs of litigation;
10. Awarding pre-judgment and post-judgment interest at the lawful rate;
11. A trial by jury on all issues of the case; and
12. Any other relief as this court may deem equitable and just, or that may be available.

DATED: November 28, 2022

Respectfully Submitted,

Thomas P. Cartmell

/s/Thomas P. Cartmell

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